DOCUMENT RESUME

ED 353 292 TM 019 052

TITLE	Report of Minnesota's Three-Year Administration of the Pre-Professional Skills Tests, 1987-90.
INSTITUTION	Minnesota State Board of Teaching, St. Paul.
PUB DATE	16 Aug 91
NOTE	98p.
PUB TYPE	Statistical Data (110) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Analysis of Variance; *Beginning Teachers; Chi Square; Comparative Testing; Elementary Secondary Education; Higher Education; *Licensing Examinations (Professions); Mathematics Tests; Minimum Competency Testing; Reading Tests; Scores; *State Programs; State Surveys; *Teacher Certification; *Testing Programs; Undergraduate Students; Writing Tests
IDENTIFIERS	Mandated Tests; *Minnesota; *Pre Professional Skills Tests; T Test

ABSTRACT

The Pre-Professional Skills Tests (PPST) of reading, mathematics, and writing are three separate tests designed to measure basic proficiency in these areas. In response to a mandate from the State Legislature, the Minnesota Board of Teaching adopted these tests, developed by the Educational Testing Service. An evaluation of the 3 years of administration of the PPST was conducted using data tapes from the 1987-90 examinations. Analysis was largely descriptive, obtaining frequency distributions of the testing groups and subgroups. Additional analysis included t-tests, analysis of variance, and chi-square procedures. Of the 21,521 examinees who took 1 or more PPST tests, most (75.3 percent) were female, and most (85.8 percent) had enrolled in or completed their undergraduate preparation at a Minnesota college or university. Only 1.8 percent of the examinees were minority group members. Overall, passing rates on the first attempts on the three PPST skills tests were 89.2 percent for reading, 95.1 percent for mathematics, and 88.2 percent for writing. Comparisons of subgroups showed a number of statistically significant differences in performance. Implications of these differences are discussed. Data indicate that for both Minnesota candidates and out-of-state candidates, the higher the education level at the time of taking the examination, the higher the level of performance. Forty-five tables present results of the analyses. (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

SP

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

KENNETH L. PEATROSS

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED353292

REPORT OF MINNESOTA'S THREE-YEAR ADMINISTRATION OF THE PRE-PROFESSIONAL SKILLS TESTS 1987-90

MINNESOTA BOARD OF TEACHING

AUGUST 16, 1991

BEST COPY AVAILABLE

TM019052

CONTENTS

ABSTRACT....2

LIST OF TABLES....6

BACKGROUND....9

Adopting Teacher Licensure Examinations....9

Setting Minnesota Qualifying Scores....10

Evaluation Plan for Teacher Examinations....11

METHODOLOGY....12

Purpose of Evaluation....12

Population....12

Procedures....12

Analysis....12

Limitations....13

References....13

RESULTS....14

Report on Gender, In-State/Out-of-State Preparation, Educational Level, and Racial/Ethnic Groups....14

Pass/Fail Patterns....22

Report on Feedback From Institutions....29

Minnesota Board of Teaching Required Evaluation....30

Institutional Responses to Providing Remedial Assistance and Services....30

Institutional Responses to Appropriateness of Dates....31

Institutional Responses to Quality of ETS Services....31

SUMMARY....32

ADMINISTRATIVE ACCOMMODATIONS AND RULE CHANGES....37

APPENDIX....38

DESCRIPTIONS OF THE PRE-PROFESSIONAL SKILLS TESTS

The Pre-Professional Skills Tests (PPST) of Reading, Mathematics, and Writing are three separate tests designed to measure basic proficiency in each of these areas. They may be taken individually or in any combination. PPST may be used for selection, admissions, evaluation, and certification in conjunction with other relevant information. A brief description of the tests' content is presented below:

- The Reading test measures skills in literal comprehension, the ability to clarify a written message and understand how the material is organized and conveys the message, and the ability to make reasoned, qualitative judgments about the nature and merits of a written message. The test consists of reading passages that vary from 100 to 200 words in length and cover topics from several sources. The reading test has 40 multiple-choice items and a total testing time of 40 minutes.

- The Mathematics test measures competencies acquired in the course of studying mathematics at least through high school. The test covers such skills as comparing and ordering numbers, interpreting graphic material, using ratios and percents, reasoning quantitatively, using measurement concepts, and other fundamental mathematical skills. The Mathematics test has 40 multiple-choice items and a testing time of 50 minutes.

- The Writing test assesses the ability to use grammar and language appropriately and to communicate effectively in writing with a specific aim or purpose in mind. The Writing test has two separately time 30-minute sections. The first section consists of 45 multiple-choice items on standard English usage and sentence correction; the second consists of one essay question. Only one total Writing score is reported.

ABSTRACT

Test Adoption:

In accordance with Minn. Stat. §125.05, subd. 1, and Minn. Stat. §125.03, subd. 5, the 1985 Minnesota Legislature authorized the Minnesota Board of Teaching to adopt teacher examinations in reading, mathematics, and writing as a requirement for initial teacher licensure. The Board adopted the Pre-Professional Skills Tests (PPST) developed by the Educational Testing Service. This process included the validation, field testing, and administration of a state-wide testing program.

In 1987, Educational Testing Service conducted a validation study that included 1) the review of the PPST questions by representative Minnesota educators to determine the job-relatedness and content appropriateness of the test for use in Minnesota, and 2) the field testing of the PPST at four Minnesota colleges. Based on the findings of the validity study, the Minnesota Board of Teaching set qualifying scores at 173 for reading, 169 for mathematics, and 172 for writing.

The Minnesota validation panel consisted of 30 Minnesota educators. Panelist membership consisted of teacher educators, teachers, principals, and counselors in different school districts across the state. The panelists reflected varied levels of academic achievement, varied lengths of teaching experiences, and varied age groups and ethnic backgrounds.

The Board of Teaching 1) established rules for implementation of policies regarding teacher examinations, requiring that effective April 4, 1988, all applicants for initial teaching licenses must achieve a minimum passing score on each of the examinations before being issued an initial Minnesota teaching license, and 2) required the implementation of an annual evaluation plan for teacher examinations.

Purpose of Study:

This study provides the evaluation of the three-year administration of the Pre-Professional Skills Tests. It provides data and information on the 1987-90 experience in accordance with the Board of Teaching Evaluation Plan requiring 1) analysis of annual data by gender, in-state/out-of-state preparation, educational level, racial/ethnic group, and number of retakes, and 2) feedback from colleges and universities regarding the type of remedial opportunities available to students and the appropriateness of test dates and sites.

Methodology:

In accordance with the Minnesota Board of Teaching Evaluation Plan, Educational Testing Service provided data tapes on the 1987-90 examinations. With assistance from the Minnesota Department of Education, the data were analyzed according to the specified variables (gender, in-state/out-of-state preparation, educational level, and racial/ethnic group).

Analysis of the data was, for the most part, descriptive. Frequency distributions of the testing groups and subgroups were obtained. In addition, further analysis of the data was done on a limited basis. Analysis beyond descriptive statistics included t-tests, analysis of variance, and chi-square procedures. All three of these analytical procedures provided insights into the question of whether differences between various groups are simply chance differences, or real differences, such as better performance on a test by one group than another (e.g., males vs. females).

Findings:

Of the 21,521 examinees who took one or more PPST tests during the 1987-90 period, and who at the time of testing coded their gender, in-state/out-of-state preparation, educational level, and/or racial/ethnic group, the majority were female (75.3 percent). Of the total, 85.8 percent of the examinees were either enrolled in or had completed their undergraduate preparation at a Minnesota college or university, and 72.9

percent of the examinees were matriculating in undergraduate programs at the time of their first attempting the PPST. The majority (54.7 percent) of the examinees were in their junior or senior year. Only 1.8 percent of the examinees were minority, either Asian/Pacific, Black, Hispanic, or Native American.

Based on the results from the 1986 Minnesota field testing study, and the projected percentages for non-qualifying examinees, data indicate that more Minnesota examinees than projected continue to pass the reading and mathematics tests on their first attempt. Non-Minnesota examinees continue to demonstrate a higher success rate than projected on all three tests.

Overall, a higher proportional percentage of the female examinees passed the writing test on their first attempt compared to male examinees. A higher proportional percentage of male examinees passed the mathematics test than did female examinees. Performance on the reading test was nearly the same for male and female examinees. Minority examinees experienced less success than did majority examinees on the initial attempt at the reading, mathematics, and writing tests. The percentage of minorities not retaking the reading test was higher than the percentage of majority examinees not retaking the reading test.

Post-senior examinees demonstrated a higher level of performance on the reading, mathematics, and writing tests of the PPST than did seniors and pre-seniors. And seniors overall performed higher on all three tests than did pre-senior examinees.

Minority examinees (Asian/Pacific, Black, Hispanic, Native American) demonstrated lower mean scores than did non-minority examinees on the reading, mathematics, and writing tests.

The 26 Minnesota institutions of higher education offering teacher preparation programs continue to provide candidates who failed the examinations access to opportunities to enhance their skills. These services generally were provided through on-campus learning centers, academic skills centers, skill laboratories, etc. Overall, Min-

nesota institutions indicated that the 1987-90 testing schedules met the needs of their candidates. Institutions recommend that continued attention be given to avoiding setting test dates at times when other examinations are occurring on campus and during semester/term breaks.

Limitation:

Although statistical differences were observed between various subgroups of the 1987-90 examinees, reservation is advised in interpretation. It should be noted that differences, although statistically significant, continue to be small. Therefore, it is strongly suggested that judgments be made conservatively and on a broader information base than this study alone provides.

TABLES

TABLE 1 Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing All First-Year, Second-Year, and Third-Year Examinees - p. 40

TABLE 2 Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Female Examinees - p. 41

TABLE 3 Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Male Examinees - p. 42

TABLE 4 Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Minnesota Examinees - p. 43

TABLE 5 Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Non-Minnesota Examinees p. 44

TABLE 6 Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Examinees by Educational Level - p. 45

TABLE 7 Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Minority Examinees - p. 47

TABLE 8 Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Examinees by Racial/Ethnic Group - p. 48

TABLE 9 Frequency Distributions and Percentages on Three Selected Variables for All PPST Examinees During the 1987-90 Statewide Testing for Minnesota Initial Licensure - p. 49

TABLE 10 Cumulative Percentages of Examinees Who Scored Below Selected PPST Reading, Mathematics, and Writing Scaled Scores 1987-90 - p. 51

TABLE 11 Selected Group Reading, Mathematics, and Writing PPST Test Failure Rates Relative to Varying Scaled Cut Scores 1987-90 - p. 52

TABLE 12 Frequency Distributions, Mean Scores, Standard Deviations and T-Values on the Reading, Mathematics, and Writing Tests of the PPST by Gender 1987-90 - p. 53

TABLE 13 Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Minnesota Female Examinees/Minnesota Male Examinees 1987-90 - p. 54

TABLE 14 Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Non-Minnesota Female Examinees/Non-Minnesota Male Examinees 1987-90 - p. 55

TABLE 15 Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Minnesota Female Examinees/Non-Minnesota Female Examinees 1987-90 - p. 56

TABLE 16 Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Minnesota Male Examinees/Non-Minnesota Male Examinees 1987-90 - p. 57

TABLE 17 Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests for Examinees by In-state/Out-of-state Preparation 1987-90 - p. 58

TABLE 18 Educational Level Indicating When Minnesota and Non-Minnesota Examinees First Attempted the PPST - p. 59

TABLE 19 Mean Scores for Minnesota and Non-Minnesota Examinees on the Three PPST Skills Tests by Educational Level 1987-90 - p. 60

TABLE 20 Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests For All Minority/Non-Minority Examinees 1987-90 - p. 61

TABLE 21 Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Specific Racial/Ethnic Groups With White Examinees - p. 62

TABLE 22 Number and Mean Scores on the Three PPST Skills Tests for all 1987-90 Examinees on 1st, 2nd, 3rd, 4th, and 5th Attempts - p. 63

TABLE 23 Number and Percentage of Minnesota Retakes on the PPST 1987-90 - p. 64

TABLE 24 Number and Percentage of Non-Minnesota Retakes on the PPST 1987-90 - p. 65

TABLE 25 Frequency Distributions and Percentage for All Retakes on the PPST by Gender 1987-90 - p. 66

TABLE 26 Frequency Distributions and Percentage for All Retakes on the PPST by Educational Level 1987-90 - p. 67

TABLE 27 Frequency Distributions and Percentage for All Retakes on the PPST by Racial/Ethnic Group 1987-90 - p. 68

TABLE 28 Frequency Distributions and Percentage of Examinees Who Attempted Tests More Than Once by Racial/Ethnic Group 1987-90 - p. 69

TABLE 29 Number and Percentage of Examinees Who on the First Attempt Failed More Than One Basic Skills Test by Gender - p. 70

TABLE 30 Number and Percentage of Examinees Who on the First Attempt Failed More Than One PPST Skills Test by In-state/Out-of-state Preparation - p. 71

TABLE 31 Number and Percentage of Examinees Who on the First Attempt Failed More Than One PPST Skills Test by Educational Level - p. 72

TABLE 32 Number and Percentage of Examinees Who on the First Attempt Failed More Than One PPSTSkills Test by Racial/Ethnic Group - p. 73

TABLE 33 Number and Percentage of Examinees Who on the First Attempt Failed the Reading, Mathematics, or Writing Test by Gender 1987-90 - p. 74

TABLE 34 Number and Percentage of Examinees Who on the First Attempt Failed the Reading, Mathematics, or Writing Tests by In-state/Out-of-state Preparation 1987-90 - p. 75

TABLE 35 Number and Percentage of Examinees Who on the First Attempt Failed the Reading, Mathematics, or Writing Tests by Educational Level 1987-90 - p. 76

TABLE 36 Number and Percentage of Examinees Who on the First Attempt Failed the Reading, Mathematics, or Writing Test by Racial/Ethnic Group - p. 77

TABLE 37 Number and Percentage of Examinees Who on the First Attempt Failed the Reading Test by Minnesota/Non-Minnesota - Educational Level - Racial/Ethnic Group - p. 78

TABLE 38 Number and Percentage of Examinees Who on the First Attempt Failed the Mathematics Test by Minnesota/Non-Minnesota - Educational Level - Racial/Ethnic Group - p. 79

TABLE 39 Number and Percentage of Examinees Who on the First Attempt Failed the Writing Test by Minnesota/Non-Minnesota - Educational Level - Racial/Ethnic Group - p. 80

TABLE 40 Analysis of Variance on PPST Reading Score for Minnesota Examinees by Educational Level 1987-90 - p. 81

TABLE 41 Analysis of Variance on PPST Mathematics Score for Minnesota Examinees by Educational Level - p. 81

TABLE 42 Analysis of Variance on PPST Writing Score for Minnesota Examinees by Educational Level - p. 81

TABLE 43 Analysis of Variance on PPST Reading Score for Non-Minnesota Examinees by Educational Level - p. 82

TABLE 44 Analysis of Variance on PPST Mathematics Score for Non-Minnesota Examinees by Educational Level - p. 82

TABLE 45 Analysis of Variance on PPST Writing Score for Non-Minnesota Examinees by Educational Level - p. 82

BACKGROUND

On April 24, 1987, the Minnesota Board of Teaching adopted the Pre-Professional Skills Tests (PPST) developed by Educational Testing Service (ETS) as the examinations of reading, mathematics, and writing required for initial teacher licensure by Minn. Stat. §125.05, subd. 1, and Minn. Stat. §125.03, subd. 5. Minimum qualifying scores were set at 173 for reading, 169 for mathematics, and 172 for writing.

Adopting Teacher Licensure Examinations

During the 1985 special session of the Minnesota Legislature, the Minnesota Board of Teaching was authorized to require persons applying for initial teaching licenses, or for additional fields of licensure, on April 4, 1988, and thereafter to successfully complete an examination of academic knowledge in each field, and for persons applying for initial licensure, an examination of skills in reading, mathematics, and writing.[1]

On February 17, 1986, the Minnesota Board of Teaching released a request for proposals (RFP), seeking bidders for the development, validation, field testing and administration of a state-wide testing program for the issuance of teaching licenses. The directive in the RFP stated:

> **The comprehensive program will include a separate examination for each skill area and a separate academic content knowledge examination for each licensure area . . . . The examination shall be designed to assure that no person is discriminated against on the basis of race, color, national origin, or other factors unrelated to the person's ability to perform as a licensed teacher.**

The goal of the RFP was to produce a state-wide examination system to:

1) Ensure that candidates for licensure demonstrate proficiency in each described skill area of reading, writing, and mathematics.

2) Identify specific areas of performance for individual diagnosis and remediation.

---

1. The requirement for successful completion of an examination of academic knowledge was repealed during the 1987 legislative session.

3) Provide test performance data to assist Minnesota institutions of higher education in modifying and strengthening their programs for preparing teachers for licensure in Minnesota.

Setting Minnesota Qualifying Scores

In the procedures to establish qualifying scores, Educational Testing Service provided comparable data on two primary reference groups. Both populations represent first-time examinees who were tested under standard conditions and fell into one of two populations:

Population 1

Graduating seniors (376) from four Minnesota colleges/universities with teacher education programs (Concordia College-Moorhead, Mankato State University, St. Cloud State University, and the University of Minnesota-Twin Cities Campus) who participated in the PPST field testing in October 1986.

Population 2

College seniors and graduates (35,751) enrolled in 284 institutions and agencies in 38 states from across the nation who were tested from February 1983 through July 1986.

The study scores from these two primary reference groups provided the data base by which the PPST scores could be interpreted in relation to the performance of appropriate reference groups.

The establishment of state-wide minimum passing scores on the PPST required for Minnesota licensure was completed and reported in the Minnesota Validity/Standard Setting Study: Pre-Professional Skills Tests (PPST) conducted in 1987 by ETS. After the systematic review of summarized standard setting study data, which represented the professional judgments of Minnesota educators from representative educational institutions, at elementary through college/university levels, a decision was made by the Minnesota Board of Teaching to set the qualifying scores at the present standards (Reading

173, Mathematics 169, Writing 172). In establishing the Minnesota qualifying scores on the PPST, the Minnesota Board of Teaching set the cut score -1 standard error of measurement (SEM). Setting the minimum passing scores lower than the study scores by -1 SEM reduced the probability that examinees with true scores at or above the cut scores would not pass the tests, if on a particular occasion, their scores were lower than their true scores.

Minimum cut scores have not changed during the three-year testing period.

Evaluation Plan for Teacher Examinations

On May 8, 1987, the Minnesota Board of Teaching required the implementation of the following evaluation plan:

1) Educational Testing Service (ETS) will provide data tapes on an annual basis with information needed to determine the number of persons achieving minimum passing scores for each skills area examination. This data tape will provide the capability to analyze the information by sex, in-state/out-of-state preparation, educational level, race/ethnicity, and number of retakes.

2) Assistance in analysis of the data will be provided by the Assessment Section of the Minnesota Department of Education.

3) Colleges and universities will be requested to provide feedback regarding the type of remedial opportunities available to students and the appropriateness of test dates and sites.

4) A summary report of the information will be provided to the Minnesota Board of Teaching on an annual basis.

METHODOLOGY

Purpose of Evaluation

This study provides the evaluation of the three-year administration of the Pre-Professional Skills Tests. It provides data and information on the 1987-90 experience in accordance with the Board of Teaching Evaluation Plan requiring 1) analysis of data by gender, in-state/out-of-state preparation, educational level, race/ethnicity, and number of retakes, and 2) feedback from Minnesota colleges and universities regarding the type of remedial opportunities available to students and the appropriateness of test dates and sites.

Population

The population is defined as all individuals who aspired/sought to meet the requirements for initial standard teaching licensure in Minnesota after April 4, 1988. The group involved in this study is a sample of that population. Thus, the population in this study is drawn from the three-year testing period 1987-90.

Procedures

In accordance with the Minnesota Board of Teaching Evaluation Plan adopted in 1987, and reaffirmed in 1989, Educational Testing Service provided 1987-90 examinee data tapes. With assistance from the assessment staff of the Minnesota Department of Education, the data were analyzed according to the specified variables (gender, in-state/out-of-state preparation, educational level, and race/ethnicity).

Analysis

Analysis of the data was, for the most part, descriptive. Frequency distributions of the testing groups and subgroups were obtained. In addition, further analysis of the data was done on a limited basis. Analysis beyond descriptive statistics included t-tests, analysis of variance, and chi-square procedures. The probability levels were set at the 0.05 level. All three of these analytical procedures provided insights into the question of

whether differences between various groups are simply chance differences, or real differences, such as better performance on a test by one group than another (e.g., males vs. females).

Limitations

1. Although statistical differences were observed between various subgroups over the three-year testing period, reservation is advised in interpretation. It should be noted that differences, although statistically significant, were not large. Therefore, it is strongly suggested that judgments be made conservatively and on a broader information base than this study alone provides.
2. All data reported are specifically descriptive of the 1987-90 examinee population, and findings are not generalizable to other populations.
3. The valid cases from which findings are reported are limited by the completeness and accuracy of the examinees' having provided, at the time of testing, the correct code identifying gender, in-state/out-of-state preparation, educational level, and race/ethnicity. In addition, the number of reported valid cases reflects that not all examinees took all three PPST skills tests.

Additional References

Final Report: Minnesota Validity/Standard Setting Study - Pre-Professional Skills Tests, *Educational Testing Service*, Evanston, Illinois, January 1987.

ETS Test Sensitivity Review Process, *Educational Testing Service*, Princeton, New Jersey, 1989.

Report of Minnesota's First-Year Administration of the Pre-Professional Skills Tests 1987-88, *Minnesota Board of Teaching*, April 20, 1989.

Report of Minnesota's Two-Year Administration of the Pre-Professional Skills Tests 1987-89, *Minnesota Board of Teaching*, October 17, 1990.

Pre-Professional Skills Tests Score Interpretation Guide, *Educational Testing Service*, 1989.

RESULTS

Report on Performance Comparing First-Year, Second-Year, and Third-Year Examinees.

Before presenting an analysis of the composite three-year testing period, data were analyzed and compared for the first, second, and third year testing periods. Data presented in Tables 1-8 indicate that there were several cases showing statistically significant differences in the performance of first-year, second-year, and third year examinees according to gender, in-state/out-of-state preparation, educational level, and racial/ethnic group.

Mean scores for first-year examinees were overall higher than second-year and third-year examinees on the reading, mathematics, and writing tests. A statistically significant difference at the 0.05 level existed between mean scores of several subgroups. First-year female examinees, first-year male examinees, and first-year pre-senior/senior/post-senior examinees generally demonstrated higher performance in mean scores than second-year and third-year examinees. A statistically significant difference existed between most of these subgroups' mean scores on the reading, mathematics, and writing tests.

An analysis of the testing population of minority examinees as a total (224 to 228 examinees) shows little difference in mean scores of minority examinees over the three-year testing period. Table 7 indicates that no statistically significant difference in mean scores existed among first-year, second-year, and third-year minority examinees on any of the three tests.

An analysis of first-year, second-year, and third-year examinees according to the specific racial/ethnic group identification showed that on each of the three skills tests first-year mean scores were generally higher than second-year mean scores, and second-year mean scores were generally higher than third-year mean scores for

Asian/Pacific examinees, Black examinees, Hispanic examinees, and Native American examinees. Table 8 indicates that for the specific racial/ethnic analysis of performance, statistically significant differences between first-year and third-year minority examinees existed only on the reading test for Asian/Pacific examinees, and on the writing test for Asian/Pacific and Native American examinees.

Report on All 1987-90 Examinees

Following is a performance summary of the 21,521 examinees who took the three skills tests of the PPST during the three year period of state-wide testing in Minnesota. The Minnesota Board of Teaching required in its evaluation plan that data on all examinees be analyzed by gender, in-state/out-of-state preparation, educational level, and racial/ethnic group.

Who in 1987-90 took the three skills tests of the PPST as a requirement for initial Minnesota teaching licensure?

Table 9 provides a summary by gender, in-state/out-of-state preparation, educational level, and racial/ethnic group for the 21,521 examinees who attempted the three tests of the Pre-Professional Skills Tests during 1987-90 administration period. As indicated, 75.3 percent of the 21,319 valid cases were females. Of the 21,047 examinees who indicated their institution, 85.8 percent either were enrolled in or had completed their undergraduate teacher education program at a Minnesota college or university.

When during their educational career did 1987-90 examinees initially attempt the PPST?

Table 9 further shows the educational level for all 1987-90 examinees at the time of examinees' first attempt at the three tests of the PPST. At the time of their first attempt 72.9 percent of the 21,495 examinees entering codes for educational level were matriculating at the undergraduate level. Juniors and seniors made up 54.7 percent of the examinees, while seniors alone constituted 30.5 percent of the examinees. Few examinees took the PPST during either their freshman year (1.8 percent) or sophomore year (18.2 percent).

What percentage of the 1987-90 examinees indicated being a member of a minority group (Asian/Pacific, Black, Hispanic, Native American)?

Less than 2.0 percent (387) of the 21,283 examinees entered codes indicating being a member of one of four minority groups. Asian/Pacific examinees constituted the largest of the four minority groups, followed by Native American examinees, Hispanic examinees, and Black examinees.

How did the 1987-90 examinees perform on the initial attempt at the three tests of the PPST?

The Minnesota Board of Teaching established minimum qualifying scores for the three tests of the PPST at 173 for reading, 169 for mathematics, and 172 for writing. These study scores were set at -1 SEM below the original study scores. The 1987 Validity Study conducted by Educational Testing Service suggested that if the study scores were adjusted to take into account the SEM (standard error of measurement), then it may be expected that the percent of Minnesota graduating seniors who score -1 SEM below the study score would be approximately 13.6 percent for reading, 7.4 percent for mathematics, and 6.0 percent for writing. These percentages were based on the results from the 1986 Minnesota field testing of the PPST.

Setting the study score -1 SEM below the study scores projected that the percent of Non-Minnesota seniors and graduates who scored -1 SEM below the study score would be approximately 22.0 percent in reading, 13.0 percent in mathematics, and 15.0 percent in writing. These percentages were based on ETS experience with the PPST in 38 states between 1983 and 1986.

Table 10 presents the cumulative percentages for 21,521 first-time attempting examinees who scored below selected PPST scaled scores on the reading, mathematics, and writing tests. Data in Table 10 indicate that overall, fewer examinees than projected failed to obtained a qualifying score on the reading and mathematics tests. However, for the writing tests, 8.0 percent of the examinees did not obtain a qualifying score on their first attempt, compared to the projected 6.0 percent.

In addition, for all examinees considering applying for initial Minnesota licensure (21,521) the mean scores on the reading test (179.9), mathematics test (180.6), and writing test (176.7) were slightly higher than the national reading mean score (178.3), mathematics mean score (178.0), and writing mean score (175.8) reported by Educational Testing Service for July 1986 to June 1989, on 161,941 examinees.

Table 11 presents a comparison of the projected non-qualifying percentages on the three tests according to three selected scaled scores. The Minnesota College Senior Field Test population provided the basis for determining how many Minnesota examinees might be expected not to qualify on each of the three skills tests. Comparing the projected non-qualifying percentages of Minnesota examinees to their reference group of Minnesota Seniors Field Test 1986 shows that fewer Minnesota examinees than projected failed to obtain a passing score on the reading and mathematics tests on their first attempt; that is, more Minnesota examinees than expected passed the reading and mathematics tests on their first attempt.

Examination of the projected non-qualifying percentages of Non-Minnesota examinees to their reference group of Out-of-State Examinees 1983-86 shows that fewer Non-Minnesota examinees than projected failed to obtain a passing score on all three skills tests.

Report on Gender, In-state/Out-of-state Preparation, Educational Level, and Racial/Ethnic Group

The following section reports the data on first-attempt examinees who coded gender, place of preparation (in-state/out-of-state), educational level, and racial/ethnic group at the time of testing.

Of the 1987-90 examinees (21,319) who entered valid codes for specific variables, 75.3 percent were female, 24.7 percent were male. Furthermore, 85.8 percent of 21,047 validly coded 1987-90 examinees were Minnesota examinees, while 14.2 percent received their undergraduate preparation out-of-state. Of 21,495 validly coded ex-

aminees, 72.9 percent were in undergraduate programs when they first attempted the three skills tests, compared to 27.1 percent who had attained, at minimum, a bachelor's degree. According to race/ethnic group 1.8 percent (387) of the 21,283 examinees indicated identification with one of four minority racial/ethnic groups.

How did the overall performance of female examinees compare to male examinees on the three skills tests of the PPST?

Table 12 presents a comparison of the mean scores of female examinees and male examinees on the three tests of the PPST. Data indicate that overall male examinees had higher mean scores on the reading and mathematics tests than did female examinees. There was a statistically significant difference in mean scores for male examinees compared to female examinees on both the reading and mathematics tests.

On the writing test, the mean score for female examinees (177.0) was higher than the mean score for male examinees (175.8). A statistically significant difference between the means on the writing test existed.

How did the performance of Minnesota female examinees compare to Minnesota male examinees on the three skills tests of the PPST?

Table 13 presents a comparison of the mean scores of Minnesota female examinees and Minnesota male examinees. Mean scores of Minnesota male examinees were higher on the reading and mathematics tests than mean scores of Minnesota female examinees. A statistically significant difference existed.

On the writing test the mean scores of Minnesota female examinees (176.8) were higher than the mean scores of Minnesota male examinees (175.7). A statistically significant difference existed between the writing mean scores.

How did the performance of Non-Minnesota Females Compared with Non-Minnesota Males?

Table 14 indicates that Non-Minnesota male examinees, compared to Non-Minnesota female examinees, demonstrated higher performance in mean scores on the

mathematics test. There was a statistically significant difference in the means on the mathematics test. Non-Minnesota female examinees had a higher mean score on the writing test than did Non-Minnesota males. A statistically significant difference existed between the writing means. On the reading test the mean scores for Non-Minnesota females (180.6) and Non-Minnesota males (180.8) were practically identical.

How did the performance of Minnesota female examinees compare to Non-Minnesota female examinees on the three skills tests of the PPST?

Table 15 compares the mean scores of Minnesota female examinees to Non-Minnesota female examinees on the three skills tests of the PPST. Mean scores for Minnesota females were slightly lower than the mean scores of Non-Minnesota females on all three tests. The mean score on the reading test for Minnesota females was 179.6 compared to 180.6 for Non-Minnesota females. The mean score on the mathematics test for Minnesota females was 179.8 compared to the mean score of Non-Minnesota females of 180.5. The mean score on the writing test for Minnesota females was 176.8 compared to the mean score of Non-Minnesota females of 177.7. There was a statistically significant difference in the reading, writing, and mathematics tests mean scores.

How did the performance of Minnesota male examinees compare to Non-Minnesota male examinees on the three skills tests of the PPST?

Table 16 presents the mean scores of Minnesota male examinees compared to Non-Minnesota male examinees on the three skills tests. On all three skills tests, mean scores for Minnesota males were lower than for Non-Minnesota males. There was a statistically significant difference in the mean scores on all three tests.

How did the performance of Minnesota and Non-Minnesota examinees compare on the three skills tests of the PPST?

Table 17 presents the frequencies, mean scores, and standard deviations for Minnesota and Non-Minnesota examinees on the three skills tests of the PPST. On the three skills tests (reading, mathematics, and writing), the mean scores for Non-Minnesota examinees were slightly higher than the mean scores for Minnesota examinees. For the

three tests, a statistically significant difference existed between the mean scores of Minnesota and Non-Minnesota examinees. The mean score on the reading test for Non-Minnesota examinees was 180.7 compared to the mean score of Minnesota examinees of 179.8. The mean score on the mathematics test for Non-Minnesota examinees was 181.1 compared to the mean score of Minnesota examinees of 180.5. The mean score on the writing test for Non-Minnesota examinees was 177.4 compared to the mean score of Minnesota examinees of 176.5.

When during their educational career did Minnesota examinees and Non-Minnesota examinees first attempt the three skills tests of the PPST?

Table 18 indicates that approximately 82.1 percent of the Minnesota examinees were in undergraduate programs when they first attempted the three skills tests, compared to 35.1 percent of the Non-Minnesota examinees.

College seniors made up 32.6 percent of the 1987-90 Minnesota examinees, compared to 49.5 percent who were at or below the junior educational level. For Non-Minnesota examinees, 14.8 percent were seniors at their first attempt on the three skills tests, 20.3 percent were juniors or below, and more than 63.8 percent were at the post-baccalaureate level.

How did the performance of Minnesota examinees compare with Non-Minnesota examinees according to educational level?

Table 19 presents a comparison of the mean scores on the three skills tests for Minnesota and Non-Minnesota examinees by educational level. The data indicate that for both Minnesota and Non-Minnesota examinees the higher the level of education at the initial time of taking the skills tests of the PPST the higher the level of performance. Although mean scores were nearly the same on all three tests for Minnesota and Non-Minnesota examinees by educational level (example: Minnesota pre-seniors compared with Non-Minnesota pre-seniors), statistically significant differences existed only on the reading and mathematics tests and between performances of seniors and post-senior examinees.

Minnesota post-seniors demonstrated higher levels of performance than did either Minnesota seniors or Minnesota pre-seniors on all three tests. Minnesota seniors demonstrated higher levels of performance than did Minnesota pre-seniors on all three tests. Tables 40-42 show that a statistically significant difference among Minnesota post-senior, senior, and pre-senior mean scores existed.

Non-Minnesota post-seniors demonstrated higher levels of performance than did either Non-Minnesota seniors and Non-Minnesota pre-seniors on all three tests. Non-Minnesota seniors demonstrated higher levels of performance than did Non-Minnesota pre-seniors on all three tests. Tables 43-45 show that a statistically significant difference among Non-Minnesota post-senior, compared with Non-Minnesota senior and Non-Minnesota pre-senior mean scores, existed on all three tests. However, there was no statistically significant difference between Non-Minnesota senior and Non-Minnesota pre-senior mean scores in mathematics and writing.

How did the performance of examinees compare between non-minority and minority examinees?

Tables 20-21 show that minority examinees compared to non-minority examinees demonstrated lower mean scores on the reading, mathematics, and writing tests. A statistically significant difference existed between the mean scores on all three tests.

Data further show that the mean scores on each of the three tests for each specific minority group (Asian/Pacific, Black, Hispanic, and Native American) were lower than mean scores of White examinees. There was a statistically significant difference in the mean scores of each specific minority group compared to non-minority examinees on the reading, mathematics, and writing tests.

Pass/Fail Patterns

The following section on pass/fail patterns provides a summary of the number of examinees who failed more than one test at the time of their first attempt, along with the examinee success rates on retakes of the three skills tests.

How did 1987-90 examinees as a population perform on the 1st, 2nd, 3rd, 4th, or 5th Attempts?

Table 22 shows that on the first attempt the mean score for all examinees was 179.5 on reading, 180.2 on mathematics, and 176.4 on writing. All three initial mean scores were well above the Minnesota established adjusted qualifying scores (173 for reading, 169 for mathematics, and 172 for writing). However, after the first attempt, performance on retakes decreased substantially. On the second attempt, the mean score on the reading test (173.2) fell to equal the qualifying score. The mean score on the mathematics test (170.5) and writing test (172.5) remained above the qualifying margin on the second attempt, but dropped below the qualifying margin after further attempts.

How did the non-qualifying percentages of Minnesota and Non-Minnesota examinees on their first attempt at the PPST compare to the projected non-qualifying percentages?

Based on the projected non-qualifying percentages established from the results of the 1986 Minnesota field testing of the PPST, it was projected for Minnesota examinees that 13.6 percent of the examinees would not qualify in reading, 7.4 percent of the examinees would not qualify in mathematics, and 6.0 percent of the examinees would not qualify in writing. Based on the ETS collected data of the percent of college seniors and graduates across 38 states, it was projected for Non-Minnesota examinees that 22.0 percent of the examinees would not qualify in reading, 13.0 percent of the examinees would not qualify in mathematics, and 15.0 percent of the examinees would not qualify in writing.

Tables 23-24 show the number and percentage of Minnesota and Non-Minnesota examinees who failed to obtain a qualifying score on one of the three skills tests of the PPST during one or more attempts. As indicated, on the first attempt fewer Minnesota examinees than projected failed to obtain a passing score on the reading and mathematics tests. On the first attempt fewer Non-Minnesota examinees than projected failed

to obtain a passing score on each of the three tests. In addition, on each of the three skills tests, a higher percentage of Minnesota examinees compared to Non-Minnesota examinees failed to obtain a passing score.

What percentage of Minnesota and Non-Minnesota examinees failed to obtain a qualifying score on retaking the reading, mathematics, or writing tests of the PPST?

Overall, it should be noted that the success rate on each of the three PPST skills tests after as many as five attempts was above 92.0 percent on each test for all of the 1987-90 examinees who attempted the tests to meet Minnesota licensure requirements.

For Minnesota examinees, 92.8 percent of the examinees passed the reading test, 96.7 percent passed the mathematics test, and 92.5 percent passed the writing test.

The percentages of Non-Minnesota examinees passing each of the three tests were higher than for Minnesota examinees. For Non-Minnesota examinees, 94.8 percent passed the reading test, 98.8 percent passed the mathematics test, and 94.6 percent passed the writing test.

What percentage of the examinees, by gender, in-state/out-of-state preparation, educational level, and racial/ethnic group attempted one or more of the skills tests more than once?

Tables 25-28 present the attempt and success rates by gender, educational level, and racial/ethnic group for those examinees who attempted one of the three skills tests more than once but fewer than six times.

Gender

As shown on Table 25, 93.2 percent of all female examinees and 92.6 percent of all male examinees successfully passed the reading test. A higher overall percentage of male examinees (98.5 percent) compared to female examinees (96.5 percent) passed the mathematics test. For the writing test, a higher percentage of female examinees (93.8 percent) compared to male examinees (87.9 percent) passed.

A higher proportional percentage of female examinees than male examinees failing one of the three skills tests attempted the test a second time. Overall, only 43.6 percent of all examinees attempted the reading test a second time, 42.4 percent attempted the mathematics test, and 42.3 percent attempted the writing test.

Educational Level

Indicated in Table 26, post-senior examinees demonstrated a higher percentage of success rate than did senior and pre-senior examinees after as many as five attempts. The overall success rate on the three tests for post-seniors was greatest on the reading test (99.6 percent), followed by success on the mathematics test (99.3 percent) and on the writing test (98.3 percent). The total percentage of post-senior examinees passing was above the projected qualifying percentages for each of the three skills tests.

Both pre-senior and senior examinees demonstrated a higher overall pass rate percentage than projected on the reading and mathematics tests, and seniors nearly met the projected overall pass rate (94.0 percent) on the writing test.

Racial/Ethnic Group

Table 27 shows multiple attempt data on the three tests of the PPST by racial/ethnic group. Data indicate that none of the first attempt passing percentages for the four racial/ethnic groups (Asian/Pacific, Black, Hispanic, or Native American) equaled or were above the projected passing rates. Examinees identifying their racial/ethnic group to be either Asian/Pacific, Hispanic, or Native American demonstrated greatest success on the mathematics test, followed by success on the reading test, with least success on the writing test.

Total pass rates for each of the four minority groups on the reading and writing tests were far below the pass rate of examinees identifying themselves as White.

How many examinees did not retake a test?

More than 50.0 percent, and as high as 75.0 percent, of all examinees who on the first attempt failed one of the three PPST tests did not retake the test failed. Table 28 presents data indicating that according to racial/ethnic group, more than 75.0 percent of the Native Americans who initially failed the mathematics tests did not retake the test. Nearly 50.0 percent of the Hispanic examinees who initially failed each of the three tests did not retake the reading, mathematics, or writing test. The percentage rate for Black examinees failing and not retaking one of three tests was between 56.0 and 66.7 percent, and for Asian/Pacific examinees 55.6 to 60.7 percent who failed did not retake the three tests.

It should also be noted that 49.9 to 70.2 percent of the non-minority examinees failing a test on the first attempt did not retake the test.

On the first attempt, what percentage of the female and male examinees failed one or more skills tests?

Table 29 shows the frequencies and percentages according to gender of examinees who failed one or more skills tests. Of the 21,120 valid cases, a total of 80.6 percent of the 1987-90 examinees passed all three skills tests on the first attempt. On the first attempt, 81.7 percent of the female examinees passed all three skills tests, compared to 77.3 percent of the male examinees. For the 21,120 valid cases, the highest percentage of failure (13.1 percent) occurred for one test. According to gender, 12.2 percent of the female examinees failed one test, compared to 15.9 percent of the male examinees.

On the first attempt, what percentage of the in-state/out-of-state examinees failed one or more skills tests?

Table 30 shows the frequencies and percentages, according to in-state/out-of-state preparation, for examinees who failed one or more skills tests on the first attempt. Of the 20,850 valid cases, 80.6 percent passed all three PPST skills tests on their first attempt. On the first attempt, 80.3 percent of the Minnesota examinees passed all three PPST skills tests on their first attempt, compared to 82.9 percent of the Non-Minnesota examinees. The number of tests most frequently failed was one. For the 20,850 validly coded examinees 13.1 percent failed one test.

On the first attempt, what percentage of the pre-seniors, seniors, and post-seniors failed one or more skills tests?

On first attempts, the passing percentages for pre-seniors, seniors, and post-seniors were all above the projected passing rates on the reading and mathematics test. None of the groups met the projected passing percentage on the writing test on the first attempt.

Table 31 presents the frequencies and percentages, according to educational level, of examinees who failed one, two, or three skills tests on their first attempt at taking all three tests. On the first attempt, 89.3 percent of the post-senior examinees passed all three skills tests, followed by seniors (81.5 percent), and pre-seniors (75.4 percent). The percentage of examinees to fail one, two, or three skills tests was highest for pre-seniors and lowest for post-seniors. The highest percentage of failure occurring for one test was 16.3 percent for pre-seniors, followed by 13.1 percent for seniors, and 7.5 percent for post-seniors.

On the first attempt, what was the performance level of examinees by racial/ethnic group on one or more skills tests?

Table 32 shows that nearly 50.0 percent of the minority examinees failed at least one test on their first attempt compared to 18.9 percent for non-minority examinees.

Which tests were most frequently failed?

Tables 33-35 present the number and percentages for examinees who failed either the reading, mathematics, or writing tests on their first attempt. For all three skills tests and according to each of the four variables (gender, in-state/out-of-state preparation, educational level, and racial/ethnic group), the skills test most frequently failed was the writing test (11.8 percent). The mathematics test was the least frequently failed (5.0 percent).

Based on the analysis by gender, there was a statistically significant difference in the percentage of male and female examinees who passed/failed the mathematics or writing tests on their first attempt.

According to in-state/out-of-state preparation, there was a statistically significant difference in the proportional percentage of pass/fail on the reading, mathematics, or writing tests.

According to educational level, the data indicate that for all three tests (reading, mathematics, and writing), the percentages of examinees who failed were higher for examinees at the pre-senior level, followed by the seniors, and lowest for post-senior examinees. There was a statistically significant difference on each test in the percentages of pre-seniors, seniors, and post-seniors to fail each test.

Table 36 shows overall a higher percentage of minority examinees most frequently failed the writing test (33.4 percent), followed by the reading test (29.5 percent), and the mathematics test (16.2 percent). The percentages of minorities failing the reading and writing tests were lower for minorities prepared in Minnesota compared to Non-Minnesota examinees. The percentage of minorities failing the mathematics test was lower for Non-Minnesota minorities compared to Minnesota minority examinees.

Tables 37-39 provide further analysis of the data according to Minnesota/Non-Minnesota, educational level, and racial/ethnic group. Overall, the failing percentages of Minnesota Black examinees, Hispanic examinees, and Native American examinees on the

reading and writing tests were generally lowest for post-seniors, followed by seniors, and greatest for pre-seniors. On the reading, mathematics, and writing tests Minnesota Asian senior examinees demonstrated a higher success percentage than did post-senior and pre-senior examinees.

Report on Feedback From Institutions

Test Administration Sites/Dates 1987-88

During the 1987-90 Pre-Professional Skills Tests administration period, the following 23 Minnesota institutions served as test center sites:

University of Minnesota-Twin Cities
University of Minnesota-Duluth
University of Minnesota-Morris
Bemidji State University
Mankato State University
Moorhead State University
St. Cloud State University
Southwest State University
Winona State University
Concordia College-Moorhead
Concordia College-St. Paul
Gustavus Adolphus College
Hamline University
St. John's University
St. Olaf College
College of St. Thomas

The following community colleges were added to the authorized test centers:

1988 (added)
Itasca Community College
Mesabi Community College
Rainy River Community College
Rochester Community College
Willmar Community College

1989 (added)
Lakewood Community College
Normandale Community College

Deans and chairpersons of colleges and departments of education at each of the 26 Minnesota colleges and universities offering teacher education programs and designated community college administrators were contacted in efforts to identify appropriate and desirable testing dates for the 1989-90 test administration period. Each institution was asked to identify a maximum of five potential testing dates from eight possible national testing dates provided by Educational Testing Service (ETS). Feedback from 26 teacher preparation institutions and from 7 community colleges was reviewed in selecting the below listed 1989-90 Minnesota test dates.

In the review of institutional selected dates, consideration was given to a multitude of factors including starting dates, quarter/semester breaks, interim sessions, time between dates, out-of-state applicants, etc.

1989-90 Minnesota Test Dates

Saturday, October 14, 1989
Saturday, January 27, 1990
Saturday, March 3, 1990
Saturday, June 23, 1990
Saturday, August 4, 1990

The 16 colleges and universities offering teacher education programs and serving as test centers were requested to test on each of the five specified dates. Community colleges offered the test on one to three dates, depending on the individual needs of each campus.

Minnesota Board of Teaching Required Evaluation

The Minnesota Board of Teaching included in its recommended evaluation plan of the PPST administration that the 26 Minnesota colleges and universities and the 7 community colleges designated as testing sites provide feedback regarding the type of remedial opportunities available to students and the appropriateness of test dates and sites.

Institutional Responses to Providing Remedial Assistance and Services

In accordance with Minnesota Rules, part 8700.0210, colleges and universities must provide candidates who fail the examinations access to opportunities to enhance their skills. What assistance and services are provided by your institution to satisfy this requirement?

Minnesota colleges and universities continue to provided candidates who failed the examinations access to opportunities to enhance their skills. Assistance programs and services vary in the types of opportunities afforded candidates. Institutions indicated that they had no major problem in providing students with guidance/help in order that they might be successful on another attempt.

Each institution provided assistance in the area of skill improvement. These services generally were provided through on-campus learning centers, academic skills centers, skill laboratories, etc., in the areas of reading, mathematics, and writing. Colleges not providing on-campus services of this nature promoted the attendance at study sessions at other institutions.

Study guides for the PPST are available at numerous locations on campuses including college bookstores and main offices of the college of education, as well as being placed on reserve at college libraries and made available at skills centers and laboratories.

Early advisement of students continues to be central to most of the institutional service programs. College advisors often meet with students, individually and in groups, to assess possible difficulties and to prescribe and identify appropriate tutorial services, test-taking seminars, and study materials to help better prepare candidates to take examinations.

Institutional Responses to Appropriateness of Dates

Did the 1989/90 PPST test administration date schedule meet the overall needs of your candidates?

The designated 1989/90 Minnesota testing dates for the PPST met the overall needs of examinees. Institutions continue to recommend that attention be given to additional dates earlier in the year, the review of summer test dates, and avoiding setting test dates at times when other examinations are occurring on campus and during institutional semester/term breaks.

Institutional Responses to Quality of ETS Services

Overall, has your institution found that Educational Testing Services (ETS) has responded expediently and accurately to inquiries from your candidates?

Institutions indicated that to their knowledge ETS has responded expediently and accurately to inquiries from their students. It was recommended that continued attention be focused on dimensions of time it took for examinees to receive admission tickets and tests results.

SUMMARY

The following findings are based on the 1987-90 data for 21,521 examinees who attempted the three skills tests of the Pre-Professional Skills Tests and who entered valid codes for identification according to gender, in-state/out-of-state preparation, educational level, and racial/ethnic group variables.

Females continue to make up more than 75.0 percent of the total examinees. An increase in the percentage of Non-Minnesota examinees was indicated from 7.2 percent in the first year to 14.2 percent for the total three year period. Nearly 27.0 percent of the three year examinees were educationally at the baccalaureate/post-baccalaureate level. This was an increase from 18.1 percent during the first year of testing.

The number of 1987-88 minority examinees (61) increased to 387 examinees over the three year period. However, throughout the three year testing period, minority examinees made up only 1.8 percent of the total three year population of 21,521.

Passing rates on the first attempt on the three PPST skills tests were reading 89.2 percent, mathematics 95.1 percent, and writing 88.2 percent. Overall, the success rate on each of the three PPST skills tests after as many as five attempts was above 92.0 percent on each of the tests. Passing rates after retaking tests were reading 92.4 percent, mathematics 96.4 percent, and writing 92.0 percent.

Findings: First-Year, Second-Year, Third-Year Comparison:

An analysis of data for first-year, second-year, and third-year examinees according to each of the four variables (gender, in-state/out-of-state preparation, educational level, and racial/ethnic group) indicated that comparisons of subgroups showed a number of statistically significant differences in performance. Mean scores for first-year examinees were overall higher than second-year and third-year examinees on the reading, mathematics, and writing tests. A statistically significant difference at the 0.05 level existed between mean scores of several subgroups. First-year female examinees, first-year

male examinees, and first-year pre-senior/senior/post-senior examinees generally demonstrated higher performance in mean scores than second-year and third-year examinees.

Three-Year Data Summary

The following findings are based on the 1987-90 data on examinees who attempted the three skills tests of the Pre-Professional Skills Tests and who entered valid codes for identification according to gender, in-state/out-of-state preparation, educational level, and racial/ethnic group variables. Each was found to have a statistically significant difference at the .05 level.

Male examinees overall demonstrated a higher level of performance on the reading and mathematics tests of the Pre-Professional Skills Tests than did female examinees. Female examinees demonstrated a higher level of performance on the writing test of the Pre-Professional Skills Tests than did male examinees.

Non-Minnesota examinees continue to demonstrate higher performance than Minnesota examinees on all three tests. However, for the third consecutive year there is little difference in the mean scores.

The data indicate that for both Minnesota and Non-Minnesota examinees the higher the level of education at the initial time of taking the skills tests of the PPST the higher the level of performance. This phenomenon was also generally true for minority examinees.

For all examinees, analyzed by gender, in-state/out-of-state preparation, educational level, and racial/ethnic group, performance was highest on the mathematics test, followed by performance on the reading test, and then writing performance.

Female compared to Male

1. Male examinees demonstrated a higher level of performance on the reading and mathematics tests of the Pre-Professional Skills Tests than did female examinees.

2. Female examinees demonstrated a higher level of performance on the writing test of the Pre-Professional Skills Tests than did male examinees.

Minnesota: Gender

3. Minnesota male examinees demonstrated a higher level of performance on the reading and mathematics tests of the Pre-Professional Skills Tests than did Minnesota female examinees.

4. Minnesota female examinees demonstrated a higher level of performance on the writing test of the Pre-Professional Skills Tests than did Minnesota male examinees.

Non-Minnesota: Gender

5. Non-Minnesota male examinees demonstrated a higher level of performance on the mathematics test of the Pre-Professional Skills Tests than did Non-Minnesota female examinees.

6. Non-Minnesota female examinees demonstrated a higher level of performance on the writing test of the Pre-Professional Skills Tests than did Non-Minnesota male examinees.

Minnesota compared to Non-Minnesota: Gender

7. Non-Minnesota female examinees demonstrated a higher level of performance on the reading, mathematics, and writing tests of the Pre-Professional Skills Tests than did Minnesota female examinees.

8. Non-Minnesota male examinees demonstrated a higher level of performance on the reading, mathematics, and writing tests of the Pre-Professional Skills Tests than did Minnesota male examinees.

Minnesota compared to Non-Minnesota

9. Non-Minnesota (prepared out-of-state) examinees demonstrated a higher level of performance on the reading, mathematics, and writing tests of the Pre-Professional Skills Tests than did Minnesota examinees.

Pre-Senior, Senior, Post-Senior

10. Minnesota post-senior examinees demonstrated a higher level of performance on the reading, mathematics, and writing tests of the Pre-Professional Skills Tests than did Minnesota senior and/or pre-senior examinees.

11. Non-Minnesota post-senior examinees demonstrated a higher level of performance on the reading, mathematics, and writing tests of the Pre-Professional Skills Tests than did Non-Minnesota senior and/or pre-senior examinees.

12. Minnesota senior examinees demonstrated a higher level of performance on the reading, mathematics, and writing tests of the Pre-Professional Skills Tests than did Minnesota pre-senior examinees.

13. Non-Minnesota senior examinees demonstrated a higher level of performance on the reading test of the Pre-Professional Skills Tests than did Non-Minnesota pre-senior examinees.

14. Minnesota post-senior examinees demonstrated a higher level of performance on reading and mathematics tests of the Pre-Professional Skills Tests than did Non-Minnesota post-senior examinees.

15. Minnesota senior examinees demonstrated a higher level of performance of the mathematics and writing tests of the Pre-Professional Skills Tests than did Non-Minnesota senior examinees.

Racial/Ethnic Group

16. Asian/Pacific, Black, Hispanic, and Native American examinees demonstrated a lower level of performance on the reading, mathematics, and writing tests of the Pre-Professional Skills Tests than did non-minority examinees.

Pass Fail Rates

17. A higher proportional percentage of Non-Minnesota examinees than Minnesota examinees passed the reading, mathematics, and writing tests.

18. A higher proportional percentage of female examinees than male examinees passed the reading and writing tests.

19. A higher proportional percentage of male examinees than female examinees passed the mathematics tests.

20. A higher proportional percentage of post-senior examinees passed all three tests compared to senior and pre-senior examinees.

21. A higher proportional percentage of senior examinees passed all three tests compared to pre-senior examinees.

22. A lower proportional percentage of minority examinees passed the reading, mathematics, and writing tests compared to non-minority examinees:

Total Percentages Passing

	Minority	Non-Minority
Reading	74.5	93.4
Mathematics	88.1	96.5
Writing	74.0	93.1

23. More than 50.0 percent of all examinees who failed one or more of the three tests on the first attempt did not retake the test(s) they had failed.

Institutional Responses

Feedback on Remediation Activities

24. Each of the 26 Minnesota institutions of higher education offering teacher preparation programs continue to provide enrolled and/or graduating candidates who failed the examinations access to remedial services including, but not limited to, on-campus learning centers, academic skills centers, skill laboratories, etc.

Feedback on Test Dates

25. Overall, Minnesota institutions indicated that the testing schedules met the needs of their candidates. It was suggested that greater attention be given to avoiding setting test dates at times when other examinations are occurring on campus and during semester/term breaks.

Feedback on ETS Services

26. Feedback from the majority of the Minnesota colleges and universities indicated that to their knowledge ETS continues to respond expediently and accurately to inquiries from their students.

ADMINISTRATIVE ACCOMMODATION AND RULE CHANGE

The following accommodation and rule change did not impact or influence the 1987-90 PPST tests administrations.

During the three year testing period in Minnesota, the Board of Teaching has discussed issues related to the administration of the Pre-Professional Skills Tests. Two notable responses to administration of the PPST are as follows:

Administrative Accommodation for Hardships - February, 1991

In certain situations, which are limited in number, and in certain circumstances, which are limited in scope and primarily related to school district affirmative action goals, individual teachers have been unable to successfully pass the required teacher licensure examinations within the period of time permitted.

For those teachers prepared in states other than Minnesota, the Board of Teaching approved a policy that an application for a limited permit to teach, based upon school district attestation to hardship, may include consideration of a request for teachers who have not currently successfully completed teacher licensure examinations.

Rule 8700.0210 [Examinations For Teacher Licenses] - April, 1991

Accommodations for examinees with visual and hearing impairments:

Subpart 1. Examination requirement. An applicant described in Minnesota Statutes, section 125.03, subdivision 5, for an initial license, shall provide official evidence of having successfully completed examinations of skills in reading, writing, and

mathematics before being issued an initial Minnesota teaching license. The examinations must have been adopted by the Board of Teaching. An applicant who is deaf must fulfill the mathematics requirement of this part by successfully completing the mathematics examination, and must fulfill the reading and writing requirements of this part either by successfully completing the reading and writing examinations or by evaluation by board approved colleges and universities of demonstrated proficiency (Intermediate Plus) in the expressive and receptive use of alternative communication systems including sigh language and fingerspelling as measured by the Sign Communication Proficiency Inventory (SCPI). This inventory is published by the National Technical Institute for the Deaf in Rochester, New York, and is administered through the College of Education at the University of Minnesota on at least an annual basis. A description of this inventory is available through the Minitex interlibrary loan system in the Journal of Sign Language Studies and American Annals for the Deaf. The inventory is incorporated by reference. Before the 1991 amendment to this part was adopted, the inventory was last published in 1989. It may be periodically changed. An applicant who is blind shall be required to fulfill requirements of this part by successfully completing the examinations with an opportunity to select a reader, to use adaptive visual aids or technology aids, and to complete the testing under adaptive conditions.

APPENDIX

TABLE 1

Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing All First-Year, Second-Year, and Third-Year Examinees

READING

All Examinees	Frequency	Mean	S.D.	YEAR First	Second	Third
First Year 87/88	5,675	180.7	4.48			
Second Year 88/89	9,008	180.4	5.07	*		
Third Year 89/90	5,693	178.6	5.70	*	*	
Valid Cases:	20,376					

MATHEMATICS

All Examinees	Frequency	Mean	S.D.	YEAR First	Second	Third
First Year 87/88	5,592	181.2	5.84			
Second Year 88/89	8,755	180.6	6.68	*		
Third Year 89/90	5,403	179.9	7.09	*	*	
Valid Cases:	19,750					

WRITING

All Examinees	Frequency	Mean	S.D.	YEAR First	Second	Third
First Year 87/88	5,668	177.2	3.58			
Second Year 88/89	9,092	176.7	3.89	*		
Third Year 89/90	5,702	176.0	4.23	*	*	
Valid Cases:	20,462					

*Significant difference at the 0.05 level.

TABLE 2

Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Female Examinees

READING

	Frequency	Mean	S.D.	YEAR		
Female:				First	Second	Third
First Year 87/88	4,415	180.5	4.45			
Second Year 88/89	6,647	180.2	5.03	*		
Third Year 89/90	4,234	178.5	5.67	*	*	
Valid Cases:	15,296					

MATHEMATICS

	Frequency	Mean	S.D.	YEAR		
Female:				First	Second	Third
First Year 87/88	4,344	180.6	5.77			
Second Year 88/89	6,483	179.8	6.35	*		
Third Year 89/90	4,035	179.2	7.02	*	*	
Valid Cases:	14,862					

WRITING

	Frequency	Mean	S.D.	YEAR		
Female:				First	Second	Third
First Year 87/88	4,382	177.4	3.49			
Second Year 88/89	6,647	177.1	3.82	*		
Third Year 89/90	4,164	176.3	4.10	*	*	
Valid Cases:	15,193					

*Significant difference at the 0.05 level.

TABLE 3

Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, Third-Year Male Examinees

READING

	Frequency	Mean	S.D.	YEAR		
Male:				First	Second	Third
First Year 87/88	1,243	181.1	4.55			
Second Year 88/89	2,244	180.4	5.20	*		
Third Year 89/90	1,406	178.8	5.78	*	*	
Valid Cases:	4,893					

MATHEMATICS

	Frequency	Mean	S.D.	YEAR		
Male:				First	Second	Third
First Year 87/88	1,231	183.4	5.54			
Second Year 88/89	2,161	182.9	5.89	*		
Third Year 89/90	1,317	182.2	6.80	*		
Valid Cases:	4,709					

WRITING

	Frequency	Mean	S.D.	YEAR		
Male:				First	Second	Third
First Year 87/88	1,269	176.6	3.83			
Second Year 88/89	2,327	175.9	3.91	*		
Third Year 89/90	1,482	175.1	4.42	*	*	
Valid Cases:	5,078					

*Significant difference at the 0.05 level.

TABLE 4

Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Minnesota Examinees

READING

	Frequency	Mean	S.D.	YEAR		
Minnesota Examinees:				First	Second	Third
First Year 87/88	5,102	180.6	4.48			
Second Year 88/89	7,573	180.1	5.08	*		
Third Year 89/90	4,406	178.3	5.69		*	
Valid Cases:	17,081					

MATHEMATICS

	Frequency	Mean	S.D.	YEAR		
Minnesota Examinees:				First	Second	Third
First Year 87/88	5,023	181.2	5.82			
Second Year 88/89	7,339	180.5	6.40	*		
Third Year 89/90	4,164	179.8	7.11	*	*	
Valid Cases:	16,526					

WRITING

	Frequency	Mean	S.D.			
Minnesota Examinees:				First	Second	Third
First Year 87/88	5,094	177.2	3.55			
Second Year 88/89	7,641	176.6	3.84	*		
Third Year 89/90	4,400	175.8	4.15	*	*	
Valid Cases:	17,135					

*Significant difference at the 0.05 level.

TABLE 5

Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year and Second-Year Non-Minnesota Examinees

READING

	Frequency	Mean	S.D.	YEAR		
Non-Minnesota:				First	Second	Third
First Year 87/88	399	181.3	4.41			
Second Year 88/89	1,253	181.5	4.69			
Third Year 89/90	1,196	179.6	5.13	*	*	
Valid Cases:	2,848					

MATHEMATICS

	Frequency	Mean	S.D.	YEAR		
Non-Minnesota:				First	Second	Third
First Year 87/88	397	181.5	5.92			
Second Year 88/89	1,237	181.4	6.00			
Third Year 1989/90	1,159	180.7	6.94			
Valid Cases:	2,793					

WRITING

	Frequency	Mean	S.D.	YEAR		
Non-Minnesota:				First	Second	Third
First Year 87/88	402	177.7	3.79			
Second Year 88/89	1,267	177.7	3.95			
Third Year 89/90	1,218	177.0	4.31	*	*	
Valid Cases:	2,887					

*Significant difference at the 0.05 level.

TABLE 6

Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Examinees by Educational Level

READING

	Frequency	Mean	S.D.	YEAR		
Pre-Seniors				First	Second	Third
First Year	2,226	179.8	4.50			
Second Year	3,982	179.0	5.06	*		
Third Year	2,703	177.7	5.47	*	*	
Valid Cases	8,911					
Seniors				First	Second	Third
First Year	2,404	180.5	4.25			
Second Year	2,441	180.2	4.87			
Third Year	1,195	178.4	5.59	*	*	
Valid Cases	6,040					
Post-Seniors				First	Second	Third
First Year	1,033	182.8	4.25			
Second Year	2,579	182.2	4.66	*		
Third Year	1,789	180.0	5.80	*	*	
Valid Cases	5,401					

MATHEMATICS

	Frequency	Mean	S.D.			
Pre-Seniors				First	Second	Third
First Year	2,208	180.5	5.81			
Second Year	3,914	179.5	6.37	*		
Third Year	2,638	179.1	6.92	*	*	
Valid Cases	8,760					
Seniors				First	Second	Third
First Year	2,351	181.2	5.75			
Second Year	2,341	180.8	6.26			
Third Year	1,089	180.0	7.25	*	*	
Valid Cases	5,781					
Post-Seniors				First	Second	Third
First Year	1,020	182.7	5.81			
Second Year	2,494	182.1	6.16			
Third Year	1,670	181.2	7.04	*	*	
Valid Cases	5,184					

*Significant difference at the 0.05 level.

Table 6 cont.

WRITING

	Frequency	Mean	S.D.	YEAR		
Pre-Seniors				First	Second	Third
First Year	2,222	176.6	3.44			
Second Year	3,971	176.0	3.67	*		
Third Year	2,687	175.3	3.91	*	*	
Valid Cases	8,880					
Seniors				First	Second	Third
First Year	2,395	177.2	3.44			
Second Year	2,516	176.3	3.62	*		
Third Year	1,218	175.5	4.08	*	*	
Valid Cases	6,129					
Post-Seniors				First	Second	Third
First Year	1,039	178.3	3.86			
Second Year	2,599	178.3	4.04	*		
Third Year	1,790	177.5	4.42	*		
Valid Cases	5,428					

48

*Significant difference at the 0.05 level.

TABLE 7

Frequency Distributions, Mean Scores, and Standard Deviations on the Three PPST Skills Tests Comparing First-Year and Second-Year Minority Examinees

READING

	Frequency	Mean	S.D.	YEAR
Total Minority Examinees				First Second Third
First-Year 87/88	57	181.2	3.92	
Second-Year 88/89	124	181.5	4.82	
Third-Year 89/90	47	180.1	4.83	
Valid Cases:	228			

MATHEMATICS

	Frequency	Mean	S.D.
Total Minority Examinees			
First-Year 87/88	57	179.8	6.34
Second-Year 88/89	120	181.1	6.26
Third-Year 89/90	47	179.4	8.01
Valid Cases:	224		

WRITING

	Frequency	Mean	S.D.
Total Minority Examinees			
First-Year 87/88	55	177.0	4.06
Second-Year 88/89	125	176.7	4.75
Third-Year 89/90	46	176.7	4.65
Valid Cases:	226		

*Significant difference at the 0.05 level.

TABLE 8

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values
on the Three PPST Skills Tests Comparing First-Year, Second-Year, and Third-Year Examinees
by Racial/Ethnic Group

		READING				MATHEMATICS				WRITING			
		Frequency	Mean	S.D.	Year*	Frequency	Mean	S.D.	Year*	Frequency	Mean	S.D.	Year*
Asian/ Pacific	First Year	17	178.1	5.53		17	178.2	6.73		20	175.4	3.75	
	Second Year	54	175.7	6.71		51	179.5	6.96		58	173.3	5.36	
	Third Year	42	171.7	8.39	3/1	31	175.2	8.76		37	170.5	6.45	3/1
Black	First Year	11	176.5	7.74		10	175.9	9.58		10	175.3	5.77	
	Second Year	26	175.3	6.50		25	173.8	5.48		23	174.3	4.65	
	Third Year	29	173.8	6.65		28	170.7	5.89		29	172.8	4.81	
Hispanic	First Year	16	179.8	6.79		14	178.7	6.12		15	175.6	4.90	
	Second Year	36	177.4	7.13		34	175.8	7.42		38	174.1	5.71	
	Third Year	23	177.1	6.26		24	174.4	6.29		25	174.7	4.36	
Native American	First Year	13	179.5	6.14		13	177.7	8.26		13	176.8	4.49	
	Second Year	43	177.3	6.67		42	176.7	7.42		48	174.8	4.31	
	Third Year	33	175.9	5.69		27	176.2	7.83		37	172.8	4.30	3/1
White	First Year	5649	180.7	4.45		5469	181.2	5.80		5542	177.2	3.56	
	Second Year	8687	180.3	5.01		8446	180.6	6.34		8761	176.8	3.83	
	Third Year	5504	178.6	5.63	3/2,3/1,2/1	5232	180.1	7.02	3/2,3/1,21	5512	176.1	4.16	3/2,3/1,2/1
Other	First Year	12	182.0	4.61		12	182.6	4.74		13	178.5	3.38	
	Second Year	38	183.7	4.00		37	182.7	5.92		39	178.4	4.37	
	Third Year	15	180.1	5.00		14	180.0	7.47		16	176.7	4.99	

*Significant difference at the 0.05 level.

TABLE 9

Frequency Distributions and Percentages on Three Selected Variables for All PPST Examinees During the 1987-90 Statewide Testing for Minnesota Initial Licensure

	Frequency N	Adjusted Percentage %	Cumulative Percentage
Gender:			
Female	16,062	75.3	
Male	5,257	24.7	
Missing	*202*		
Total:	**21,521**	**100.0**	
Undergraduate Institution:			
Minnesota	17,999	85.8	
Non-Minnesota	3,048	14.2	
Missing	*474*		
Total:	**21,521**	**100.0**	
Educational Level:			
Freshman	395	1.8	1.8
Sophomore	3,516	18.2	17.1
Junior	5,208	24.2	42.4
Senior	6,549	30.5	72.9
Bachelor's	4,122	19.2	92.1
Graduate work	1,037	4.8	96.9
Master's	635	3.0	99.8
Doctor's	33	.2	100.0
Missing	*26*		
Total:	**21,521**	**100.0**	

(Continued)

TABLE 9
(Continued)

Frequency Distributions and Percentages on Three Selected Variables for All PPST Examinees During the 1987-90 State-wide Testing for Minnesota Initial Licensure

Race/Ethnicity	Frequency	Percentage	Cumulative Percentage
Asian/Pacific	125	.6	.6
Black	74	.3	.9
Hispanic	85	.4	1.3
Native American	103	.5	1.8
Other	68	.3	2.1
White	20,828	97.9	100.0
Missing	*238*		
Total:	**21,521**	**100.0**	

TABLE 10

Cumulative Percentages of Examinees Who Scored Below Selected PPST Reading, Mathematics, and Writing Scaled Scores 1987-90

PPST Scaled Score	Reading N=21,521 % Below		Mathematics N=21,521 % Below		Writing N=21,521 % Below	
190	99.9		93.5		100.0	
189	99.2		89.2		100.0	
188	97.1		83.8		99.9	
187	92.9		78.3		99.6	
186	86.7		72.7		98.8	
185	80.4		68.2		97.7	
184	71.0		62.2		95.8	
183	63.4		56.4		93.3	
182	56.2		50.5		87.6	
181	49.2		44.9		82.7	
180	42.3	Mean 179.9	39.6	Mean 180.6	76.7	
179	36.5		36.7		69.7	
178	30.9		31.9		57.8	
177	25.7		27.2		48.6	
176	19.9		23.0		39.7	
175	15.6		19.1		30.9	
174	11.6		15.7		18.8	
173 Reading Qualifying	**7.6....-1 SEM**		12.5		12.9	Mean 176.7
172 Writing Qualifying	6.1		9.9		**8.0...-1 SEM**	
171	4.8		7.6		5.5	
170	3.9		5.3		3.2	
169Math Qualifying	3.1		**3.6...-1 SEM**		2.1	
168	2.2		2.7		1.3	
167	1.2		2.2		.9	
166	1.5		1.5		.4	
165	1.0		1.1		.2	
164	.6		.8		.1	
163	.4		.6		.1	
162	.3		.3		.0	
161	.1		.2		.0	
160	.1		.1		.0	
159	.1		.1		.0	
158	.0		.0		.0	

In calculating the study values in scaled scores adjusted for tolerance of SEMs, the SEM for each test was substracted from the decimal value of the study score and the result was rounded to a whole number (.5 always rounded up to maintain consistency with the PPST scoring reports). The SEM is 2.4 for Reading, 2.5 for Writing, and 2.5 for Mathematics.

TABLE 11

Selected Group Reading, Mathematics, and Writing PPST Test
Failure Rates Relative to Varying Scaled Cut Scores
1987-90

	READING			MATHEMATICS			WRITING		
	SS 175*	SS 173 (-1SEM)	SS 171 (-2SEM)	SS 171*	SS 169 (-1SEM)	SS 166 (-2SEM)	SS 175*	SS 172 (-1SEM)	SS 170 (-2SEM)
	%	%	%	%	%	%	%	%	%
All 1987-90 Examinees	15.9	7.6	4.8	7.6	3.6	2.2	30.9	8.0	3.2
In-State Examinees Minnesota Institutions (1987-90)	16.5	7.8	4.9	7.8	3.8	1.5	31.9	8.1	3.2
Out-of-State Examinees (1987-90)	11.8	6.3	3.8	6.1	2.6	1.3	25.2	6.8	2.8
Minnesota College Seniors Field Test-1986	22.9	13.6	9.3	9.3	7.4	3.2	27.6	6.0	2.2
All Seniors 1987-90	14.6	5.6	3.5	6.3	2.7	1.1	32.2	6.8	2.6
Out-of-State Examinees 38 States 1983-86	29.0	22.0	16.0	18.0	13.0	8.0	32.0	15.0	8.0

*The original mean study values in scaled scores were Reading 175.3, Mathematics 171.46, and Writing 174.6. The study values were obtained by rounding the original scaled scores calculated in decimal values to the nearest whole numbers (.5 always rounded up to maintain consistency with the PPST scoring reports).

Note: In calculating the study values in scaled scores adjusted for tolerance of SEMs, the SEM for each test was substracted from the decimal value of the study score and the result was rounded to a whole number. The SEM is 2.4 for Reading, 2.5 for Mathematics, and 2.5 for Writing.

TABLE 12

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Reading, Mathematics, and Writing Tests of the PPST by Gender 1987-90

	Frequency	Mean Score	Standard Deviation	t
Reading:				
Female	15,296	179.8	5.13	4.03*
Male	4,893	180.1	5.29	
Valid Cases:	20,189			
Mathematics:				
Female	14,862	179.9	6.40	27.66*
Male	4,709	182.8	6.09	
Valid Cases:	19,571			
Writing:				
Female	15,193	177.0	3.83	-17.99*
Male	5,078	175.8	4.08	
Valid Cases:	20,271			

*Significant difference at the 0.05 level.

TABLE 13

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Minnesota Female Examinees/Minnesota Male Examinees 1987-90

READING

	Frequency	Mean	S.D.	t
Minnesota:				
Females	12,783	179.6	5.13	4.55*
Males	4,154	180.1	5.22	
Valid Cases:	16,937			

MATHEMATICS

	Frequency	Mean	S.D.	t
Minnesota:				
Females	12,388	179.8	6.39	25.76*
Males	3,999	182.7	6.07	
Valid Cases:	16,387			

WRITING

	Frequency	Mean	S.D.	t
Minnesota:				
Females	12,912	176.8	3.79	-16.27*
Males	4,301	175.7	3.98	
Valid Cases:	16,985			

*Significant difference at the 0.05 level.

TABLE 14

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Non-Minnesota Female Examinees/Non-Minnesota Male Examinees 1987-90

READING

	Frequency	Mean	S.D.	t
Non-Minnesota:				
Females	2,188	.180.64	5.00	.51
Males	628	180.76	5.00	
Valid Cases:	2,816			

MATHEMATICS

	Frequency	Mean	S.D.	t
Non-Minnesota:				
Females	2.159	180.52	6.37	9.82*
Males	609	183.37	5.95	
Valid Cases:	2,762			

WRITING

	Frequency	Mean	S.D.	t
Non-Minnesota:				
Females	2,191	177.71	3.91	-6.61*
Males	666	176.52	4.52	
Valid Cases:	2,857			

*Significant difference at the 0.05 level.

TABLE 15

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Minnesota Female Examinees/Non-Minnesota Female Examinees 1987-90

READING

	Frequency	Mean	S.D.	t
Female:				
Minnesota	12,783	179.6	5.13	-8.30*
Non-Minnesota	2,188	180.6	5.00	
Valid Cases:	14,971			

MATHEMATICS

	Frequency	Mean	S.D.	t
Females:				
Minnesota	12,388	179.8	6.39	-4.93*
Non-Minnesota	2,159	180.5	6.37	
Valid Cases:	14,547			

WRITING

	Frequency	Mean	S.D.	t
Females:				
Minnesota	12,684	176.8	3.79	-10.03*
Non-Minnesota	2,191	177.7	3.91	
Valid Cases:	14,875			

*Significant difference at the 0.05 level.

TABLE 16

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests Comparing Minnesota Male Examinees/Non-Minnesota Male Examinees 1987-90

READING

	Frequency	Mean	S.D.	t
Males:				
Minnesota	4,154	180.1	5.20	-3.02*
Non-Minnesota	628	180.7	5.59	
Valid Cases:	4,782			

MATHEMATICS

	Frequency	Mean	S.D.	t
Males:				
Minnesota	3,999	182.7	6.07	-2.34*
Non-Minnesota	603	183.4	5.95	
Valid Cases:	4,602			

WRITING

	Frequency	Mean	S.D.	t
Males:				
Minnesota	4,301	175.7	3.98	-4.72*
Non-Minnesota	666	176.5	4.52	
Valid Cases:	4,967			

*Significant difference at the 0.05 level.

TABLE 17

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests For Examinees by In-State/Out-of-State Preparation 1987-90

	Frequency	Mean Score	Standard Deviation	t
Reading:				
Minnesota	17,081	179.8	5.15	-8.65*
Non-Minnesota	2,848	180.7	5.13	
Valid Cases:	19,929			
Mathematics:				
Minnesota	16,526	180.5	6.44	-4.69*
Non-Minnesota	2,793	181.1	6.41	
Valid Cases:	19,319			
Writing:				
Minnesota	17,135	176.5	3.87	-11.15*
Non-Minnesota	2,887	177.4	4.10	
Valid Cases:	20,022			

*Significant difference at the 0.05 level.

TABLE 18

Educational Level Indicating When Minnesota and Non-Minnesota Examinees First Attempted the PPST

READING

	Minnesota		Non-Minnesota	
	Number	Percent	Number	Percent
Freshman	386	2.2	27	0.9
Sophomore	3,448	19.3	250	8.1
Junior	5,011	28.0	346	11.3
Senior	5,832	32.6	455	14.8
Post-Bac.	3,195	17.9	1,990	63.8

MATHEMATICS

	Minnesota		Non-Minnesota	
	Number	Percent	Number	Percent
Freshman	387	2.2	27	0.9
Sophomore	3,448	19.4	250	8.2
Junior	4,995	28.1	346	11.3
Senior	5,794	32.6	451	14.4
Post-Bac.	3,176	17.8	1,980	64.8

WRITING

	Minnesota		Non-Minnesota	
	Number	Percent	Number	Percent
Freshman	386	2.2	26	0.8
Sophomore	3,445	19.3	252	8.2
Junior	4,997	27.9	346	11.3
Senior	5,802	32.4	454	14.8
Post-Bac.	3,180	17.8	1,986	64.7

TABLE 19

Mean Scores for Minnesota and Non-Minnesota Examinees on the Three PPST Skills Tests by Educational Level 1987-90

READING

Educational Level	Minnesota Number	Minnesota Mean	Non-Minnesota Number	Non-Minnesota Mean	t
Pre-Senior	8,245	178.8	514	178.8	0.02
Senior	5,529	180.0	401	179.6	1.52
Post-Senior	3,292	181.8	1,931	181.4	2.56*
Valid Cases	17,066		2,846		

MATHEMATICS

Educational Level	Minnesota Number	Minnesota Mean	Non-Minnesota Number	Non-Minnesota Mean	t
Pre-Senior	8,114	179.7	498	179.9	-0.67
Senior	5,278	180.9	391	180.1	2.21*
Post-Senior	3,119	182.1	1,901	181.7	2.52*
Valid Cases	16,511		2,790		

WRITING

Educational Level	Minnesota Number	Minnesota Mean	Non-Minnesota Number	Non-Minnesota Mean	t
Pre-Senior	8,212	175.9	515	175.9	0.16
Senior	5,602	176.6	419	176.0	3.09*
Post-Senior	2,507	178.0	1,110	178.1	0.91
Valid Cases	17,120		2,994		

*Significant difference at the 0.05 level.

TABLE 20

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values on the Three PPST Skills Tests For All Non-Minority/Minority Examinees 1987-90

	Frequency	Mean Score	Standard Deviation	t
Reading:				
Non-Minority	19,740	179.9	5.11	14.08*
Minority	343	176.0	7.04	
Valid Cases:	20,083			
Mathematics:				
Non-Minority	19,147	180.6	6.41	12.43*
Minority	316	176.1	7.49	
Valid Cases:	19,463			
Writing:				
Non-Minority	19,815	176.7	3.88	14.06*
Minority	353	173.8	5.17	
Valid Cases:	20,168			

*Significant difference at the 0.05 level.

TABLE 21

Frequency Distributions, Mean Scores, Standard Deviations, and T-Values
on the Three PPST Skills Tests Comparing
Specific Racial/Ethnic Groups With White Examinees

	READING				MATHEMATICS				WRITING			
	Frequency	Mean	S.D.	t	Frequency	Mean	S.D.	t	Frequency	Mean	S.D.	t
Asian/Pacific	113	174.5	7.5	-11.15*	99	177.9	7.7	-4.22*	115	172.8	5.7	-10.83*
White	19,740	179.9	5.1		19,147	180.6	6.4		19,815	176.7	3.9	
Black	66	174.9	6.7	-8.02*	63	172.8	6.6	-9.76*	62	173.7	4.9	-6.01*
White	19,740	179.9	5.1		19,147	180.6	6.4		19,815	176.7	3.9	
Hispanic	59	177.3	7.2	4.19*	55	175.6	7.5	5.82*	60	174.1	5.5	5.16*
White	14,928	180.1	5.1		14,507	180.6	6.3		14,959	176.7	3.9	
Native American	89	177.1	6.3	-5.18*	82	176.7	7.6	-5.57*	98	174.3	4.5	-6.18*
White	19,740	179.9	5.1		19,147	180.6	6.4		19,815	176.7	3.9	

*Significant difference at the 0.05 level.

TABLE 22

Number and Mean Scores on Three PPST Skills Tests for all 1987-90 Examinees on 1st, 2nd, 3rd, 4th, and 5th Attempts

Number of Attempts	Reading Mean Score	Mathematics Mean Score	Writing Mean Score
First	179.5 n= 21,431	180.2 n= 21,376	176.4 n= 21,428
Second	173.2 n= 1,151	170.5 n= 528	172.5 n= 1,222
Third	171.4 n= 339	168.9 n= 110	171.7 n= 291
Fourth	170.1 n= 122	168.3 n= 32	170.9 n= 81
Fifth	171.6 n= 55	168.9 n = 13	171.2 n= 26

TABLE 23

Number and Percentage of Minnesota
Retakes on the PPST 1987-90

READING

	1st Attempt	2nd Attempt	3rd Attempt	4th Attempt	5th Attempt	TOTAL PASS RATE
Attempted	17,887	956	273	99	41	
Failed	1,982	432	160	61	20	
	11.1%	45.2%	58.6%	61.6%	48.8%	
Passed	15,905	524	113	38	21	16,601
	88.9%	54.8%	41.4%	38.4%	51.2%	92.8%

MATHEMATICS

Attempted	17,838	405	81	25	10	
Failed	895	142	41	16	6	
	5.0%	35.1%	50.6%	64.0%	60.0%	
Passed	16,943	263	40	9	4	17,259
	95.0%	64.9%	49.4%	36.0%	40.0%	96.7%

WRITING

Attempted	17,872	997	229	60	17	
Failed	2,128	362	106	33	8	
	11.9%	36.3%	46.3%	55.0%	47.1%	
Passed	15,744	635	123	27	9	16,538
	88.1%	63.7%	53.7%	45.0%	52.9%	92.5%

Projected non-qualifying percentages for Minnesota seniors 13.6 percent for Reading, 7.4 percent for Mathematics, and 6.0 percent for Writing for the first-time examinees

BEST COPY AVAILABLE

TABLE 24

Number and Percentage of Non-Minnesota
Retakes on the PPST 1987-90

READING

	1st Attempt	2nd Attempt	3rd Attempt	4th Attempt	5th Attempt	TOTAL PASS RATE
Attempted	3,070	163	55	18	11	
Failed	275 9.0%	74 45.4%	34 61.8%	13 72.2%	9 81.8%	
Passed	2,795 91.0%	89 54.6%	21 38.2%	5 27.8%	2 18.2%	2,912 94.8%

MATHEMATICS

Attempted	3,065	101	27	6	3	
Failed	136 4.4%	27 26.7%	8 29.6%	1 16.7%	0 0.0%	
Passed	2,929 95.6%	74 73.3%	19 70.4%	5 83.3%	3 100.0	3,030 98.8%

WRITING

Attempted	3,078	195	58	17	9	
Failed	334 10.9%	76 39.0%	23 39.7%	8 47.1%	5 55.6%	
Passed	2,744 89.1%	119 61.0%	35 60.3%	9 52.9%	4 44.4%	2,911 94.6%

Projected non-qualifying percentages for Non-Minnesota seniors and graduates 22.0 percent for Reading, 13.0 percent for Mathematics, and 15.0 percent for Writing for the first-time examinees

TABLE 25
Frequency Distributions and Percentage for All
Retakes on the PPST by Gender
1987-90

READING

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Attempted	12,020	3,899	550	161	139	35	43	7	14	3		
Failed	1,224	405	233	65	70	18	28	5	8	1		
	10.2%	10.4%	42.4%	40.4%	51.5%	51.4%	65.1%	71.4%	57.1%	33.3%		
Passed	10,796	3,494	317	96	66	17	15	2	6	2		
	89.8%	89.6%	57.6%	59.6%	48.5%	48.6%	34.9%	28.6%	42.9%	66.7%	93.2%	92.6%

MATHEMATICS

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Attempted	12,003	3,890	272	37	52	4	11	0	2	0		
Failed	638	90	95	8	22	1	8	0	0	0		
	5.3%	2.3%	34.9%	21.6%	42.3%	25.0%	72.7%	0.0%	0.0%	0.0%		
Passed	11,365	3,800	177	29	30	3	3	0	2	0		
	94.7%	97.7%	65.1%	78.4%	57.7%	75.0%	27.3%	0.0%	100.0%	66.7%	96.5%	98.5%

WRITING

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Attempted	12,012	3,909	492	275	82	48	18	13	5	3		
Failed	1,137	677	155	102	34	24	10	7	2	1		
	9.5%	17.3%	31.5%	37.1%	41.5%	50.0%	55.6%	53.8%	40.0%	33.3%		
Passed	10,875	3,232	337	173	48	24	8	6	3	2		
	90.5%	82.7%	68.5%	62.9%	58.5%	50.0%	44.4%	46.2%	60.0%	66.7%	93.8%	87.9%

BEST COPY AVAILABLE

TABLE 26
Frequency Distributions and Percentage for All
Retakes on the PPST by Educational Level 1987-90

READING

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE
	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	
Pre-Senior	8,247 (86%)	1,392 (14%)	170 (56%)	135 (44%)	20 (59%)	14 (41%)	2 (40%)	3 (60%)	0	0	87.9%
Senior	5,764 (90%)	636 (10%)	307 (55%)	254 (45%)	65 (44%)	82 (56%)	21 (57%)	16 (43%)	3 (30%)	7 (70%)	95.3%
Post-Senior	5,082 (95%)	287 (5%)	151 (53%)	134 (47%)	54 (34%)	104 (66%)	21 (26%)	59 (74%)	21 (47%)	24 (53%)	99.6%

MATHEMATICS

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE
	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	
Pre-Senior	9,031 (94%)	605 (6%)	86 (66%)	45 (34%)	6 (50%)	6 (50%)	0	1 (100%)	1 (100%)	0	94.9%
Senior	6,087 (96%)	284 (4%)	163 (65%)	89 (35%)	27 (56%)	21 (44%)	7 (58%)	5 (42%)	3 (100%)	0	98.1%
Post-Senior	5,170 (97%)	174 (3%)	99 (69%)	45 (31%)	27 (54%)	23 (46%)	8 (42%)	11 (58%)	3 (33%)	6 (67%)	99.3%

WRITING

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE
	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	
Pre-Senior	8,267 (86%)	1,370 (14%)	166 (64%)	92 (36%)	16 (57%)	12 (43%)	4 (44%)	5 (56%)	0	0	88.5%
Senior	5,596 (88%)	800 (12%)	393 (62%)	243 (38%)	73 (61%)	47 (39%)	9 (56%)	7 (44%)	7 (70%)	3 (30%)	93.7%
Post-Senior	5,009 (93%)	362 (7%)	215 (66%)	111 (34%)	71 (50%)	72 (50%)	24 (43%)	32 (57%)	6 (37%)	10 (63%)	98.3%

TABLE 27

Frequency Distributions and Percentage for All Retakes on the PPST by Racial/Ethnic Group 1987-90

READING

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE
	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	
Asian/ Pacific	74 (61%)	47 (39%)	4 (21%)	15 (79%)	3 (25%)	9 (75%)	0	7 (100%)	0	5 (100%)	81 (87.1%)
Black	48 (66%)	25 (34%)	4 (36%)	7 (64%)	1 (20%)	4 (80%)	0	0	0	0	53 (72.6%)
Hispanic	66 (78%)	19 (22%)	1 (13%)	7 (87%)	2 (100%)	0	0	0	0	0	69 (81.2%)
Native American	75 (74%)	26 (26%)	3 (30%)	7 (70%)	1 (20%)	4 (80%)	0	2 (100%)	1 (100%)	0	80 (79.2%)
White	18,562 (90%)	2,185 (10%)	611 (56%)	484 (44%)	132 (42%)	181 (58%)	43 (39%)	68 (61%)	22 (46%)	26 (54%)	19,370 (93.4%)

MATHEMATICS

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE
	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	
Asian/ Pacific	98 (85%)	18 (15%)	5 (63%)	3 (37%)	1 (100%)	0	0	0	0	0	104 (89.6%)
Black	53 (74%)	19 (24%)	3 (33%)	6 (67%)	2 (67%)	1 (33%)	0	0	0	0	58 (80.5%)
Hispanic	69 (83%)	14 (17%)	2 (29%)	5 (71%)	1 (33%)	2 (67%)	1 (50%)	1 (50%)	1 (100%)	0	74 (89.1%)
Native American	88 (88%)	12 (12%)	1(100%)	2 (50%)	2 (50%)	0	0	0	0	0	91 (91.0%)
White	19,714 (95%)	991 (5%)	199 (68%)	96 (32%)	56 (54%)	47 (46%)	14 (47%)	16 (53%)	6 (50%)	6 (50%)	19,989 (96.5%)

(Table 27 continues on next page).

TABLE 27 (Cont.)

WRITING

	1st Attempt		2nd Attempt		3rd Attempt		4th Attempt		5th Attempt		TOTAL PASS RATE
	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	Passed	Failed	
Asian/ Pacific	67 (55%)	56 (45%)	6 (27%)	16 (73%)	4 (31%)	9 (69%)	1 (17%)	5 (83%)	1 (33%)	2 (68%)	79 (64.2%)
Black	55 (75%)	18 (25%)	1 (17%)	5 (83%)	1 (33%)	2 (67%)	0	0	0	0	57 (78.1%)
Hispanic	62 (73%)	23 (27%)	5 (46%)	6 (54%)	1 (100%)	0	0	0	0	0	68 (80.0%)
Native American	66 (64%)	37 (36%)	12 (63%)	7 (37%)	2 (40%)	3 (60%)	0	1 (100%)	0	0	80 (77.7%)
White	18,376 (89%)	2,364 (11%)	744 (65%)	409 (35%)	150 (56%)	117 (44%)	36 (49%)	38 (51%)	12 (52%)	11 (48%)	19,318 (93.1%)

Table 28
Frequency Distributions and Percentage of
Examinees Who Attempted Tests More Than Once
by Racial/Ethnic Group 1987-90

READING

	Total Number First Attempting	Number Failed On First Attempt	Number Attempting More Than Once	Number Not Attempting More Than Once	Percentage Failed Not Re-Attempting
Asian/Pacific	121	47	19	28	59.6
Black	73	25	11	14	56.0
Hispanic	85	19	8	11	57.9
Native American	101	26	10	16	61.5
White	20,747	2,185	1,095	1,090	49.9

MATHEMATICS

	Total Number First Attempting	Number Failed On First Attempt	Number Attempting More Than Once	Number Not Attempting More Than Once	Percentage Failed Not Re-Attempting
Asian/Pacific	116	18	8	10	55.6
Black	72	19	9	10	52.6
Hispanic	83	14	7	7	50.0
Native American	100	12	3	9	75.0
White	20,705	991	295	696	70.2

WRITING

	Total Number First Attempting	Number Failed On First Attempt	Number Attempting More Than Once	Number Not Attempting More Than Once	Percentage Failed Not Re-Attempting
Asian/Pacific	123	56	22	34	60.7
Black	73	18	6	12	66.7
Hispanic	85	23	11	12	52.2
Native American	103	37	19	18	48.6
White	20,740	2,364	1,153	1,211	51.2

TABLE 29

Number and Percentage of Examinees Who on the First Attempt Failed More Than One PPST Skills Test by Gender*

	FEMALES		MALES		TOTAL	
	Number	Percent	Number	Percent	Number	Percent
All Tests Failed	251	1.6	51	1.0	302	1.4
Two Tests Failed	718	4.5	302	5.8	1,020	4.8
One Test Failed	1,939	12.2	826	15.9	2,765	13.1
No Tests Failed	13,010	81.7	4,023	77.3	17,033	80.6
Total:	15,918	75.4	5,202	24.6	21,120	100.0

*Not all examinees took all three tests. Percentages are based on 21,120 valid cases.

TABLE 30

Number and Percentage of Examinees Who on the First Attempt Failed More Than One PPST Skills Test by In-state/Out-of-state Preparation*

	MINNESOTA		NON-MINNESOTA		TOTAL	
	Number	Percent	Number	Percent	Number	Percent
All Tests Failed	256	1.4	29	.9	285	1.4
Two Tests Failed	871	4.9	145	4.7	1,016	4.9
One Test Failed	2,384	13.4	347	11.4	2,731	13.1
No Tests Failed	14,284	80.3	2,534	82.9	16,818	80.6
Total:	17,795	85.3	3,055	14.6	20,850	100.0

*Not all examinees took all three tests. Percentages are based on 20,850 valid cases.

TABLE 31

Number and Percentage of Examinees Who on the First Attempt Failed More Than One PPST Skills Test by Educational Level*

	PRE-SENIOR		SENIOR		POST-SENIOR	
	Number	Percent	Number	Percent	Number	Percent
All Tests Failed	184	1.9	83	1.3	37	.7
Two Tests Failed	607	6.3	290	4.6	132	2.5
One Tests Failed	1,571	16.3	830	13.1	400	7.5
No Tests Failed	7,253	75.4	5,147	81.1	4,761	89.3
Total:	9,615	45.2	6,350	29.8	5,330	25.0

*Not all examinees took all three tests. Percentages are based on 21,295 valid cases.

TABLE 32

Number and Percentage of Examinees Who on The First Attempt Failed More Than One PPST Skills Test By Racial/Ethnic Group*

	Asian/ Pacific	Black	Hispanic	Native American	White	TOTALS
All Tests Failed	13 11.3%	5 7.1%	6 7.2%	8 8.0%	271 1.3%	303 1.4%
Two Tests Failed	27 23.5%	12 17.1%	7 8.2%	13 13.0%	963 4.7%	1,022 4.9%
One Test Failed	17 14.8%	20 28.6%	22 26.5%	24 24.0%	2,682 13.0%	2,765 13.1%
No Tests Failed	58 50.4%	33 47.1%	48 57.8%	55 55.0%	16,734 81.1%	16,928 81.5%
Total:	115	70	83	100	20,650	21,018

*Not all examinees took all three tests. Percentages are based on 21,018 valid cases.

TABLE 33

Number and Percentage of Examinees Who on the First Attempt Failed the Reading, Mathematics, or Writing Test by Gender 1987-90

READING

	MALE	FEMALE	TOTAL
Number Attempted	5,233	15,997	21,230
Number Failed	557	1,741	2,298
Percent to Fail	10.6%	10.9%	10.8%

chi square= 0.20979

MATHEMATICS

	MALE	FEMALE	TOTAL
Number Attempted	5,215	15,963	21,178
Number Failed	137	915	1,052
Percent to Fail	2.6%	5.7%	5.0%*

chi square= 79.62128

WRITING

	MALE	FEMALE	TOTAL
Number Attempted	5,239	15,988	21,227
Number Failed	926	1,572	2,498
Percent to Fail	17.7%	9.8%	11.8%*

chi square= 233.00053

*Significant difference at 0.05 level.

TABLE 34

Number and Percentage of Examinees Who on the First Attempt Failed the Reading, Mathematics, or Writing Test by In-State/Out-of-State Preparation 1987-90

READING

	Minnesota	Non-Minnesota	Total
Number Attempted	17,887	3,070	20,957
Number Failed	1,982	275	2,257
Percent to Fail	11.1%	9.0%	10.8%*

chi square= 14.36137

MATHEMATICS

	Minnesota	Non-Minnesota	Total
Number Attempted	17,838	3,065	20,903
Number Failed	895	136	1,031
Percent to Fail	5.0%	4.4%	4.9%*

chi square= 8.85474

WRITING

	Minnesota	Non-Minnesota	Total
Number Attempted	17,872	3,078	20,950
Number Failed	2,128	334	2,462
Percent to Fail	11.9%	10.9%	11.8%*

chi square= 7.71980

*Significant difference at 0.05 level.

TABLE 36

Number and Percentage of Examinees Who on the First Attempt Failed the Reading, Mathematics, or Writing Test by Racial/Ethnic Group

READING

	Asian/ Pacific	Black	Hispanic	Native American	TOTALS
Number Attempted	108	70	75	96	349
Minnesota	88	44	63	83	278
Non-Minnesota	20	26	12	13	71
Number Failed	39	23	15	26	103
Minnesota	30	14	15	23	82
Non-Minnesota	9	9	0	3	21
Percent Failed	36.1	32.9	20.0	27.1	29.5
Minnesota	34.1	31.8	23.8	27.7	29.5
Non-Minnesota	45.0	34.6	0.0	23.1	29.6

MATHEMATICS

	Asian/ Pacific	Black	Hispanic	Native American	TOTALS
Number Attempted	104	67	73	95	339
Minnesota	85	44	61	83	273
Non-Minnesota	19	23	12	12	66
Number Failed	16	17	10	12	55
Minnesota	14	9	10	12	45
Non-Minnesota	2	8	0	0	10
Percent Failed	15.4	25.4	13.7	12.6	16.2
Minnesota	16.5	20.5	16.4	14.6	16.5
Non-Minnesota	10.5	34.8	0.0	0.0	15.1

WRITING

	Asian/ Pacific	Black	Hispanic	Native American	TOTALS
Number Attempted	107	69	75	96	347
Minnesota	87	43	63	83	276
Non-Minnesota	20	26	12	13	71
Number Failed	45	18	19	34	116
Minnesota	36	12	16	28	92
Non-Minnesota	9	6	3	6	24
Percent Failed	42.1	26.1	25.3	35.4	33.4
Minnesota	41.4	27.9	25.4	33.7	[illegible].3
Non-Minnesota	45.0	23.1	25.0	46.1	33.8

TABLE 35

Number and Percentage of Examinees Who on the First Attempt Failed the Readng, Mathematics, or Writing Test by Educational Level 1987-90

READING

	Pre-Senior	Senior	Post-Senior	Total
Number Attempted	9,639	6,400	5,369	21,408
Number Failed	1,392	636	287	2,315
Percent to Fail	14.4%	9.9%	5.3%	10.2%*

chi square= 303.07840

MATHEMATICS

	Pre-Senior	Senior	Post-Senior	Total
Number Attempted	9,636	6,371	5,344	21,351
Number Failed	605	284	174	1,063
Percent to Fail	6.3%	4.5%	3.3%	5.0%*

chi square= 71.59387

WRITING

	Pre-Senior	Senior	Post-Senior	Total
Number Attempted	9,637	6,396	5,371	21,404
Number Failed	1,370	800	362	2,532
Percent to Fail	14.2%	12.5%	6.7%	11.8*

chi square= 188.83838

*Significant difference at the 0.05 level.

TABLE 37

Number and Percentage of Examinees Who on the
First Attempt Failed the Reading Test
by Minnesota/Non-Minnesota - Educational Level - Racial/Ethnic Group

READING

	MINNESOTA/PRE-SENIOR					MINNESOTA/SENIOR					MINNESOTA/POST-SENIOR				
	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White
Number Attempted	39	10	25	41	8658	30	15	20	29	5662	19	19	18	13	3037
Number Failed	17	6	7	15	1211	6	6	4	6	539	7	2	4	2	133
Percent Failed	43.6	60.0	28.0	36.6	14.0	20.0	40.0	20.0	20.7	9.5	36.8	10.5	22.2	15.4	4.4

READING

	NON-MINNESOTA/PRE-SENIOR					NON-MINNESOTA/SENIOR					NON-MINNESOTA/POST-SENICR				
	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White
Number Attempted	3	4	1	3	610	1	3	1	1	443	16	19	10	9	1902
Number Failed	2	2	0	1	93	1	2	0	0	60	6	5	0	2	99
Percent Failed	66.7	50.0	0.0	33.3	15.2	100.0	66.7	0.0	0.0	13.5	37.5	26.3	0.0	22.2	5.2

BEST COPY AVAILABLE

TABLE 38

Number and Percentage of Examinees Who on the
First Attempt Failed the Mathematics Test
by Minnesota/Non-Minnesota - Educational Level - Racial/Ethnic Group

MATHEMATICS

	MINNESOTA/PRE-SENIOR					MINNESOTA/SENIOR					MINNESOTA/POST-SENIOR				
	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White
Number Attempted	39	10	25	41	8643	29	15	19	29	5626	17	19	17	13	3022
Number Failed	8	3	4	9	523	2	4	4	2	230	4	2	2	1	78
Percent Failed	20.5	30.0	16.0	22.0	6.1	6.9	26.7	21.1	6.9	4.1	23.5	10.5	11.8	7.7	2.6

MATHEMATICS

	NON-MINNESOTA/PRE-SENIOR					NON-MINNESOTA/SENIOR					NON-MINNESOTA/POST-SENIOR				
	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White
Number Attempted	3	2	1	3	611	1	2	1	1	441	15	19	10	8	1895
Number Failed	0	1	0	0	33	1	0	0	0	32	1	7	0	0	58
Percent Failed	0.0	33.3	0.0	0.0	5.4	100.0	0.0	0.0	0.0	7.3	6.7	36.8	0.0	0.0	3.1

BEST COPY AVAILABLE

TABLE 39

Number and Percentage of Examinees Who on the
First Attempt Failed the Writing Test
by Minnesota/Non-Minnesota - Educational Level - Racial/Ethnic Group

WRITING

	MINNESOTA/PRE-SENIOR					MINNESOTA/SENIOR					MINNESOTA/POST-SENIOR				
	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White
Number Attempted	39	10	25	41	8641	30	14	20	29	5633	18	19	18	13	3023
Number Failed	21	5	8	18	1153	8	6	5	9	660	7	1	3	1	175
Percent Failed	53.8	50.0	32.0	43.9	13.3	26.7	42.9	25.0	31.0	11.7	38.9	5.3	16.7	7.7	5.8

WRITING

	NON-MINNESOTA/PRE-SENIOR					NON-MINNESOTA/SENIOR					NON-MINNESOTA/POST-SENIOR				
	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White	Asian/ Pacific	Black	Hispanic	Native American	White
Number Attempted	3	4	1	3	611	1	3	1	1	442	16	19	10	9	1899
Number Failed	2	1	1	1	101	1	2	0	0	78	6	3	2	5	119
Percent Failed	66.7	25.0	100.0	33.3	16.5	100.0	66.7	0.0	0.0	17.6	37.5	15.8	20.0	55.6	6.3

BEST COPY AVAILABLE

TABLE 40

Analysis of Variance on PPST Reading Score for Minnesota Examinees by Educational Level 1987-90

Source	D.F.	Sum of Squares	Mean Squares	f
Between Groups	2	20452.5	10226.2	403.3*
Within Groups	17063	432613.3	25.3	
Total	17,065	453065.7		

TABLE 41

Analysis of Variance on PPST Mathematics Score for Minnesota Examinees by Educational Level

Source	D.F.	Sum of Squares	Mean Squares	f
Between Groups	2	14851.3	7425.7	182.7*
Within Groups	16508	670812.0	40.6	
Total	16,510	685663.3		

TABLE 42

Analysis of Variance on PPST Writing Score for Minnesota Examinees by Educational Level

Source	D.F.	Sum of Squares	Mean Squares	f
Between Groups	2	10186.6	5093.3	353.0*
Within Groups	17117	246982.2	14.4	
Total	17,119	257168.9		

*Significant at the 0.05 level.

TABLE 43

Analysis of Variance on PPST Reading Score for Non-Minnesota Examinees by Educational Level

Source	D.F.	Sum of Squares	Mean Squares	f
Between Groups	2	3170.3	1585.1	62.8*
Within Groups	2843	71701.6	25.2	
Total	2,845	74871.9		

TABLE 44

Analysis of Variance on PPST Mathematics Score for Non-Minnesota Examinees by Educational Level

Source	D.F.	Sum of Squares	Mean Squares	f
Between Groups	2	1766.6	883.3	21.9*
Within Groups	2787	112413.1	40.3	
Total	2,789	114179.7		

TABLE 45

Analysis of Variance on PPST Writing Score for Non-Minnesota Examinees by Educational Level

Source	D.F.	Sum of Squares	Mean Squares	f
Between Groups	2	3027.9	1514.0	96.0*
Within Groups	2881	45409.6	15.8	
Total	2,883	48437.6		

*Significant at the 0.05 level.